UNIVERSITY OF ALBERTA

THERAPIST ADHERENCE TO TREATMENT MANUALS AND ITS RELATION TO THE THERAPEUTIC ALLIANCE AND THERAPY OUTCOME: SCALE DEVELOPMENT AND VALIDATION

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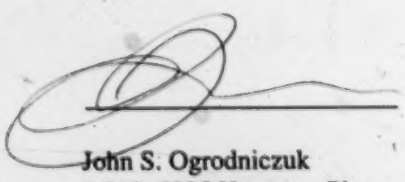

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DEDICATION

This work is dedicated to my late Grandfather, Franciszek (Frank) Ogrodniczuk. His whole-hearted faith in me and pride in my accomplishments made my efforts all the more worthwhile. His unselfishness was beyond that expected of anyone and for this I offer the fruit of my work, this Thesis, as a small token of my loving appreciation.

To my wife, Jennifer, I also dedicate this work. Her support, comfort, and encouragement were the catalysts of my effort. She provided sage counsel and was my source of endurance whenever I felt overwhelmed. Her unconditional commitment to support me through this time deserves more than I can give, but to this end, I devote my work to her in appreciation.

ABSTRACT

Three sequential studies that focused on the development and validation of a 14-item Adherence Scale for two forms (interpretive, supportive) of short-term, psychodynamic, individual psychotherapy were conducted. Adherence was defined as the degree of conformity to a technical manual. It was differentiated, conceptually and operationally, from two other constructs, amount of technique and purity of technique. The first two studies determined the psychometric properties (rater reliability, internal consistency, factor structure) of the Adherence Scale. The third study tested a number of hypotheses involving adherence, amount of technique, purity of technique, the therapeutic alliance, and treatment outcome, and provided additional information about the psychometric properties (construct validity) of the scale. The three studies utilized data from two previous clinical investigations of psychotherapy outcome. Results from the first two studies revealed that the Adherence Scale can be used reliably by trained Bachelors-level raters and is internally consistent. In addition, the factor structure of the 14 items corresponded to the rationally developed structure of the scale. Findings from the third study revealed that therapist adherence was not significantly related to either the alliance or outcome. In general, only amount of technique was significantly associated with the alliance. Neither adherence, amount, nor purity was significantly related to treatment outcome. However, the patient's and the therapist's perception of the alliance were each significantly associated with favourable outcome. Examination of the effect of interactions between the predictor variables and the alliance failed to reveal any significant findings beyond those attributable to chance. Exploratory analyses of the data identified associations between specific treatment features and the alliance and outcome.

Focus on transference was found to be positively associated with the therapist's perception of a strong alliance in interpretive therapy and negatively associated with favourable treatment outcome in supportive therapy. Practical implications of the findings and themes for future research are also considered.

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INTRODUCTION

OVERVIEW

Psychotherapy is primarily a verbal form of treatment. For any specific form of psychotherapy, the potential for technical variability is great when it is provided by different therapists. It is essential that psychotherapy researchers be able to verify the different forms of therapy that are provided in their studies. Comparisons of the effects of different forms of psychotherapy depend upon the assurance that they differed as intended. Although training, supervision, and use of treatment manuals contribute to technical fidelity, only careful monitoring can verify the nature of the technique. Adherence is defined as the degree to which a therapist follows technique according to a manual. There is a need to develop adherence measures that are psychometrically sound and efficient to use.

Developing adherence measures is relevant to the current focus of psychotherapy research, which involves the examination of both the process and outcome of treatment. The aim of this focus is to understand the mechanisms of change in therapy. Thus, the investigation of theoretically relevant and clinically useful concepts has been stressed in the search for the effective ingredients of psychotherapy. One such concept is therapist adherence. The issue of adherence was born from researchers' interest in documenting the extent to which therapists used techniques as prescribed by a technical manual. Although there is a growing body of support for the use of measurements that document therapist adherence, there has been little emphasis on studying the relationship between adherence and the process and outcome of psychotherapy.

PRESENT STATE OF KNOWLEDGE

The following sections will focus on the use of treatment manuals in psychotherapy research and how use of these manuals has stimulated interest in measuring therapist adherence. I will also discuss conceptual and methodological issues pertaining to the assessment of adherence. I then synthesize some of what has been learned thus far from previous efforts in studying therapist adherence. Finally, a review of another important process variable, the therapeutic alliance, will set the stage for the current study.

Treatment Manuals. Over the past fifteen years, treatment manuals have emerged as an important development in psychotherapy research (Luborsky & Barber, 1993). The advent and use of manuals was stimulated by a demand from the research community to address the issue of verification in psychotherapy studies. Treatment manuals are intended to provide a more specific description of the treatment variable. They are meant to control therapist effects so that researchers may be more certain that their results are a product of the treatment variable. Treatment manuals, unlike other descriptions of psychotherapy such as general, broad-focused textbooks, provide explicit guidelines for strategies and techniques for therapists to follow when implementing a particular approach (Luborsky & DeRubeis, 1984; Moncher & Prinz, 1991). In a review of the history of treatment manual use, Luborsky and DeRubeis (1984) noted a dramatic increase in the development of therapy manuals and that such manuals have "become a virtual research requirement" (p.5) in psychotherapy studies. The use of treatment

manuals has become so common that there are few outcome studies that do not employ them (Lambert & Bergin, 1994).

Treatment manuals have been developed for several types of psychotherapy, including different variants of behaviour therapy (Bootzin & Ruggill, 1988; Linehan, 1987; Wolpe, 1969), cognitive therapy (Beck & Emery, 1986; Beck, Rush, Shaw, & Emery, 1979), interpersonal psychotherapy (Klerman & Neu, 1976; Klerman, Weissman, Rounsaville, & Chevron, 1984), and humanistic therapies (Greenberg & Goldman, 1988). Several psychodynamic treatment manuals have also been devised, beginning with Luborsky's (1984) manualization of his supportive-expressive psychoanalytically oriented therapy. Manuals for a number of other short-term dynamic psychotherapies have emerged, such as time-limited dynamic psychotherapy (TLDP; Strupp & Binder, 1984), short-term dynamic psychotherapy (STDP; Davanloo, 1980), and short-term anxiety-provoking psychotherapy (STAPP; Sifneos, 1979).

Therapy manuals address a number of research concerns:

1) Manuals provide clear-cut guidelines for training and mastery of techniques (Binder, 1993; Dobson & Shaw, 1988; Henry, Schacht, Strupp, Butler, & Binder, 1993b; Luborsky & DeRubeis, 1984).

2) Manuals provide criteria for evaluation of competency (Dobson & Shaw, 1988; Luborsky & DeRubeis, 1984).

3) Manuals enhance the internal validity of research studies by ensuring that a specific set of identifiable treatment procedures exist (Rounsaville, O'Malley, Foley, & Weissman, 1988).

4) Manuals increase the ability to replicate research methods by explicitly specifying techniques and strategies used (Dobson & Shaw, 1988; Moncher & Prinz, 1991).

5) Manuals help sort out the active ingredients of psychotherapy by facilitating the objective comparison of the components of therapies (Dobson & Shaw, 1988; Lambert & Bergin, 1994; Luborsky & DeRubeis, 1984; Moncher & Prinz, 1991). This allows researchers to analyze the commonalities and differences between treatments.

6) Manuals help improve the purity of the therapy. They specify techniques prescribed for a particular therapy as well as techniques that are proscribed (Dobson & Shaw, 1988; Luborsky & DeRubeis, 1984; Waltz, Addis, Koerner, & Jacobson, 1993).

7) By specifying techniques for a particular protocol, manuals aid in the development of measurement devices that assess therapists' adherence to the protocol (Binder, 1993; Hill, O'Grady, & Elkin, 1992; Luborsky & DeRubeis, 1984).

In addition to these research concerns, governmental agencies and insurance companies advocate the need for the specification of treatments they pay for and the necessity of a method for determining the qualifications of therapy practitioners (Butler & Strupp, 1993; Luborsky & DeRubeis, 1984). Treatment manuals also help satisfy these concerns.

Adherence. The rise in the use of treatment manuals has been accompanied by an

increasing interest in measuring the extent to which therapists do what is prescribed by the manuals in their delivery of treatment (Hill et al., 1992; Moncher & Prinz, 1991; Waltz et al., 1993). It is expected that psychotherapy researchers not only use treatment manuals to improve the purity of their treatments, but also document their efforts in achieving this purity. This latter expectation has created a demand for providing adherence measures. There are varying definitions of adherence in the psychotherapy literature (e.g. Butler & Strupp, 1993; Shapiro & Startup, 1992; Waltz et al, 1993); however, adherence is most often defined as the degree to which the therapist uses the techniques specified in a treatment manual (e.g. Beckham, 1990; Strupp, Butler, & Rosser, 1988). Adherence has significant implications for the internal validity, external validity, and construct validity of treatment outcome research.

Internal validity refers to whether the experimental design is sufficiently controlled to infer that any effect is due to the experimental conditions (Sechrest, 1984). Adherence provides a verification of the experimental conditions. If therapists do not adhere to the treatment manual and deliver the therapy as intended, the findings from the study are susceptible to multiple interpretations. For example, if significant results are found in a controlled study, but adherence was not checked, it is not known if the treatment is effective or whether the apparent efficacy is related to extraneous elements of the intervention that were inadvertently present (Moncher & Prinz, 1991; Yeaton & Sechrest, 1981). Similarly, if nonsignificant results are found, and no check on adherence was done, it is not known whether the therapy was ineffective, or if it is capable of being effective but was not implemented as intended (Salend, 1984; Waltz et al, 1993).

External validity refers to the degree to which the results of an experiment may be generalized to other situations. Measuring adherence in psychotherapy studies is important because it allows the researcher to clearly identify the treatment that was provided. Sufficient data documenting the extent of therapist adherence to the treatment protocol thus enable other researchers to more accurately replicate the study. They also facilitate the comparison of different studies that may not necessarily be replications.

Construct validity is defined as the degree to which a measurement device accurately measures the theoretical construct it is designed to measure. It is established by showing that a measure is related in a systematic way to other measures as would be expected from the theoretical nature of the construct. The construct validity of a scale may be determined by taking into account the variables with which the scale correlates significantly and those with which it does not. As well, the conditions found to affect the scale's score and the groups that differ significantly on such scores are important to consider. Determining the constructs assessed by an adherence measure may follow a number of steps, such as: a) examining the correlations between an adherence measure and outcome of therapy; b) comparing the degree of adherence of contrasted groups, such as experienced and inexperienced therapists; and c) examining the degree of adherence by therapists with different patient populations. It is only through the empirical investigation of the relationships of adherence measures to other external data that we can discover its construct validity.

Adherence is important for practical and ethical considerations as well. Moncher and Prinz (1991) noted that adherence measures promote early detections of errors in

following the treatment protocol, which can then be corrected, thereby reducing costs and improving treatment. Peterson, Homer, and Wonderlich (1982) suggested that documentation of adherence is essential in outcome research, and a failure to adhere to the therapy protocol could result in harm to the patients.

Despite the increasing use of treatment manuals and the growing awareness of the need for adherence checks in psychotherapy research, the inclusion of such measurements is not standard practice at this point (Waltz et al., 1993). As Moncher and Prinz (1991) noted, the majority (55%) of studies from the decade of the 1980's essentially ignored the issue of measuring adherence.

Clarification of Key Concepts. Critical to the area of psychotherapy research is clarification of a number of key concepts associated with the adherence construct. The purpose of this section is to focus on four major concepts that appear to capture what is important in this area, and to provide clear definitions for each. They are:

Adherence: the degree of conformity to a technical manual.

Amount: the quantity of technique.

Purity: the proportion of technique, relative to other techniques.

Competence: the skillful provision of technique.

Each of these concepts has both unique and common characteristics. The failure of researchers to distinguish among them has created confusion. It is hoped that by distinguishing these important concepts, redundancy and confusion will be avoided.

A simple, hypothetical example is offered to help clarify the differences of these

concepts and how they may be applied. The setting for this example is an outpatient psychiatric clinic. A doctor uses a manual to guide his treatment of a patient with paranoid schizophrenia. The manual instructs the doctor to administer a 62.5 ml depot injection to the patient. One injection contains 12.5mg of Drug X (a phenothiazine), the rest consisting of the inactive oily vehicle. The manual instructs the doctor to administer the injection once tri-weekly over a 21-week treatment period; thus the doctor is to provide the depot injection seven times. The manual states that 12.5mg +/-1mg is the optimal range for the amount of Drug X to be given during each administration. However, the doctor actually gave Drug X doses of 12.5mg, 13.5mg, 14mg, 12mg, 12.5mg, 12mg, and 13mg over the 21-week treatment period. The doctor also administered a barbiturate over the treatment period to help reduce the patient's anxiety. The doctor provided 4 doses over the treatment period. The barbiturate was administered with the first, third, fourth, and sixth administrations of Drug X. The doses given were 5mg, 6mg, 7mg, and 8mg. The doctor started the barbiturate treatment with low dosages and increased them gradually to achieve a clinical effect.

The doctor's manual defined a range of optimal dosage to be 12.5mg +/-1mg of Drug X. The doses administered by the doctor were within this range for six of the seven treatment days. Considering the definition of adherence given above (i.e. the degree of conformity to a technical manual), it is clear that over the course of the treatment period the doctor adhered to the manual to a considerable degree. Depending on what a manual instructs, adherence could correspond to a range of amounts, as in this example, or to a specific amount. If the doctor's manual specified an exact amount of 12.5mg of Drug X

to be given, the doctor would be judged to have adhered poorly to the treatment manual because he only administered the correct dosage twice. Thus we see in this example how different uses of amount to define adherence can lead to very different conclusions about the level of adherence.

Purity is the proportion of a given technique, relative to all techniques used. To measure purity, the amount of technique, in this example the amount of Drug X, is divided by the sum of all techniques used, the sum of the amount of Drug X given and the amount of any other drugs given. A pure session is one in which no other technique is used besides the prescribed intervention. A pure session is numerically represented by 1.00. Purity for the first treatment day in this example is assessed in the following manner: 12.5mg Drug X divided by the sum of 12.5mg Drug X and 5mg barbiturate (12.5/17.5 = .71). The purities for the six other treatment days are: 13.5/13.5 = 1.00; 14/14+6 = .70; 12/12+7 = .63; 12.5/12.5 = 1.00; 12/12+8 = .60; and 13/13 = 1.00. It can be seen that each day's Drug X treatment dosage was quite pure. This tells us that even though the Drug X treatment was contaminated by the barbiturate, the Drug X treatment was relatively pure.

The doctor's manual did not specify whether Drug X treatment required abstinence from other psychoactive medications. For maximum therapeutic effectiveness for this patient, Drug X should not have been given concomitantly with other medications. It was assumed that the doctor would follow this protocol. However, because of the doctor's large workload, the doctor did not take the time to identify the effect that barbiturates have on Drug X treatment before the drugs were administered.

Barbiturates actually increase metabolism of phenothiazines (Drug X) due to the induction of liver enzymes; therefore, there is a reduction in the phenothiazine effect. It may be determined from this that the doctor was not competent in his delivery of the treatment because he did not show skillful implementation of the Drug X treatment. This is separate from adherence because the manual only instructed that Drug X be given to the patient, but did not say in what manner. The doctor did give Drug X to the patient (he was adhering) but in an inappropriate manner (he did not deliver it competently). If the manual explained how to competently administer Drug X and the doctor did follow the manual, competence and adherence become redundant constructs. With such a manual, skill (competence) is no longer questioned because specific therapist performance is detailed in the manual. When the doctor follows (adheres to) this manual, he is performing competently.

The example given above dealt with medication, however, it is believed that these concepts are also applicable to psychotherapy. With these concepts in mind, a review of recent therapy adherence research will demonstrate that conceptual problems, e.g., confounding adherence with amount, remain an issue in the field.

Previous Work Concerning Adherence Measures. In recent years, a number of adherence measures have been developed. This section will review the following measures and the studies that have utilized them: the Collaborative Study Psychotherapy Rating Scale (CSPRS; Hollon, Evans, Elkin, & Lowery, 1984), the Sheffield Psychotherapy Rating Scale (SPRS; Shapiro & Startup, 1992), the Vanderbilt Therapeutic

Strategies Scale (VTSS; Butler, Henry & Strupp, 1992), the Purity rating form (Luborsky, McLellan, Woody, O'Brien, & Auerbach, 1985), adherence scales for three brief psychodynamic psychotherapies (Winston et al., 1987; 1992), and the Penn Adherence/Competence Scale for Supportive-Expressive dynamic psychotherapy (PACS-SE; Barber & Crits-Christoph, 1996).

The Collaborative Study Psychotherapy Rating Scale was initially designed for the National Institute of Mental Health Treatment of Depression Collaborative Research Program (TDCRP: Elkin, Parloff, Hadley, & Autry, 1985). The CSPRS, containing 96 items, was developed primarily as a measure of adherence to the three conditions in the TDCRP: pharmacotherapy and medical management, cognitive-behavioural therapy, and interpersonal therapy. Trained observers rated entire treatment sessions on the extent to which therapists engaged in behaviours prescribed by the treatment manuals. The method involved rating chiefly the extensiveness, that is the frequency and intensity, of therapists' behaviours on a 7-point Likert-type scale with higher ratings representing increasing amounts of the behaviour. A study by Hill, O'Grady, and Elkin (1992) used the CSPRS to rate therapist adherence in Cognitive-Behaviour Therapy (CBT) Interpersonal Therapy (IPT), and Clinical Management (CM). Their results showed that the three treatments could be differentiated almost perfectly and that therapists exhibited more behaviours appropriate to their own respective treatment protocol than to the other protocols. The authors reported moderate to high internal consistency for these three subscales: alpha = .79 (CBT), alpha = .89 (IPT), and alpha = .69 (CM). Rater reliabilities, indicated by intraclass correlation coefficients (Shrout & Fleiss, 1979) were: ICC (2,8) = .88, ICC

(2,8) = .78, and ICC (2,8) = .80, for the CBT, IPT, and CM sub-scales, respectively. It must be noted that eight raters were required to achieve these high reliabilities. Their magnitude would most certainly decrease with fewer raters. A scale that requires so many raters may be inefficient and costly.

In a pair of studies examining determinants of change in therapy for depression, DeRubeis and Feely (1990, 1995) rated therapist adherence to a manual for short-term cognitive therapy. In each study, 25 patients with a diagnosis of Major Depressive Disorder were treated. Adherence was measured using one scale from the CSPRS. This scale, containing 28 seven-point Likert-type items, concerned cognitive therapy procedures and strategies, thereby reflecting therapist adherence to the methods of cognitive therapy. In a factor analysis, adherence was separated into two factors. One factor (CT-concrete) represented the more theory-specified therapist actions. The other factor (CT-abstract) represented less focused, more "abstract" dimensions of therapy (DeRubeis & Feely, 1990). Two adherence subscales representing each of these factors were derived. Ten items were included in the CT-concrete subscale and nine items were used for the CT-abstract subscale. Rater reliabilities for these two scales in the 1990 study, as calculated by the intraclass correlation coefficient, were ICC (2,2) = .63 for CT-concrete and ICC (2,2) = .86 for CT-abstract. In the 1995 study, the ICC (2,2) interrater reliabilities were .75 for CT-concrete and .60 for CT-abstract (DeRubeis & Feely, 1990; 1995). DeRubeis and Feely (1990, 1995) found that therapist adherence to the theory-specified therapist actions (CT-concrete) in cognitive therapy was significantly related to patient improvement. This relationship, however, was evident only early in treatment (up

to session three). The finding that later time periods did not show a significant relationship between adherence to the problem-focused aspects of cognitive therapy and patient improvement led DeRubeis and Feely (1995) to speculate that the early and frequent application of these methods seems to be the key to positive therapy outcome. They have also suggested that the patients who "allow" their therapists to implement the specific procedures of cognitive therapy are those who are bound to improve (DeRubeis & Feely, 1990).

Considering their emphasis on the frequent application of prescribed methods, it appears that DeRubeis and Feely were not measuring adherence, but rather were assessing amount. This conclusion is based on the unlikely prospect of a treatment manual instructing therapists to implement specific techniques as often as possible.

The Sheffield Psychotherapy Rating Scale, an adaptation of the CSPRS, was developed to assess therapists' adherence to Exploratory Therapy, a psychodynamic experiential therapy with an interpersonal focus, and Prescriptive Therapy, a multimodal cognitive-behavioural treatment (Shapiro & Startup, 1992). The SPRS contains 59 items organized into three principal scales: prescriptive therapy, exploratory therapy, and facilitative conditions. The facilitative conditions scale monitors general therapist behaviour. Trained listeners rated audio recordings of whole, hour-long therapy sessions. They rated the therapists' use of each technique on a seven point Likert-type scale, varying from "not at all" (1) to "extensively" (7). The rating method was similar to that used with the CSPRS. That is, it involved rating the frequency and intensity of therapists' behaviour. Higher ratings indicated greater amounts of the behaviour. Rater reliability

for the prescriptive and exploratory scales, estimated by the intraclass correlation coefficient model 1, were ICC (1,1) = .85 and ICC (1,1) = .78, respectively (Shapiro & Startup, 1992). Startup and Shapiro (1993) also used the SPRS to assess adherence in an outcome study comparing eight and 16 session forms of the prescriptive and exploratory psychotherapies. In this study, all five participating therapists delivered both forms of therapy. Therapists were trained in the therapies according to their respective manuals and were subsequently supervised throughout the duration of the study. Startup & Shapiro report that exploratory and prescriptive treatments could be differentiated almost perfectly using the SPRS. They also noted that adherence did not vary with the severity of the clients' symptoms and that there was little evidence that it varied with duration of treatment.

The Vanderbilt Therapeutic Strategies Scale (VTSS) is a 21-item scale divided into two subscales: the 12-item Interviewing Style subscale, which measures general interviewing behaviour, and the 9-item Specific Strategies subscale, which measures specific adherence to the Time-Limited Dynamic Psychotherapy (TLDP) protocol (Henry, Strupp, Butler, Schacht, & Binder, 1993). Trained raters used videotapes of the 3rd and 16th therapy sessions to assess adherence. Third session ratings addressed entire sessions, while 16th session ratings focused on the middle 15-minute segments of sessions. Adherence items were rated on a 5-point Likert scale, with higher ratings indicating greater frequency. Rater reliability was .91, as measured by the intraclass correlation coefficient, for the Specific Strategies subscale (Henry, Strupp et al., 1993). Henry, Strupp et al. (1993) found that therapists adhered more to the TLDP protocol after

training with the TLDP manual.

Henry, Strupp et al. (1993) also found that after training (and thereby with increased adherence) there was an "unexpected deterioration in certain interpersonal and interactional aspects of therapy" (p.438) as measured by the Vanderbilt Psychotherapy Process Scale (VPPS) and the Structural Analysis of Social Behavior (SASB). The VPPS is an 80-item scale that is used to assess significant attitudes and behaviours that are displayed in patient-therapist interaction. Prior factor analysis of the VPPS has revealed eight stable factors. Two of the factors measured by the VPPS were examined in the Henry et al. study: Therapist Warmth and Friendliness, and Negative Therapist Attitude. There was not a significant difference between pre- and posttraining scores on the two VPPS factors, although the direction of the differences was toward less therapist warmth and friendliness, and greater expression of negative attitude. There was, however, a significant relationship between training and change on some of the items used to measure these factors. These significant relationships indicated that after training, therapists were less optimistic, were less supportive of patients' confidence, spent less time evaluating patients' feelings, and behaved in a more authoritarian manner. Near significant relationships suggested that therapists demonstrated less overt approval of their patients and were more defensive.

The SASB is a system used to provide a fine-grained analysis of the moment-by-moment interpersonal process. It focuses on two dimensions thought to underlie interpersonal transactions: affiliation and interdependence. Henry et al. used the SASB to measure the raw frequencies and percentages of hostile and complex communications.

Complex communications can be defined as therapist statements that send mixed messages to the patient. After training, therapists significantly increased their frequency of complex communications, although the percentage of these communications did not increase significantly. There was a nonsignificant increase in the number of messages rated as hostile.

Henry, Strupp et al. (1993) noted that these findings are particularly disturbing because previous work (Henry, Schacht, & Strupp, 1986; O'Malley, Suh, & Strupp, 1983) demonstrated the importance of these VPPS (therapist warmth and friendliness, and negative therapist attitude) and SASB (hostile and complex communications) variables to positive therapeutic outcome. To explain why therapists became less optimistic and supporting, less approving, and more authoritative and defensive after training, Henry et al. suggested that therapists may become anxious as they struggle to integrate new techniques into their existing style of therapeutic performance. To cope with this anxiety, therapists may become more rigid and authoritative and, as a result, appear more distant in their effort to adhere to the interventions of a new protocol. They are then seen as being less warm and friendly. Furthermore, as therapists call attention to the patients' cyclical maladaptive patterns, the therapists may develop a more negative attitude toward their patients. It was also reported by Henry, Strupp et al. (1993) that after training, therapists seemed somewhat mechanical and their interventions were often ill-timed. They concluded that "the abstract knowledge base that allows therapists to verbally enunciate principles taught and to technically adhere to protocols does not necessarily enable them to adequately monitor their own behavior or appreciate the ongoing

interactional process as it unfolds with actual patients" (Henry, Strupp et al., 1993, p.439).

In further work with the VTTS, Henry, Schacht, Strupp, Butler, and Binder (1993) found that therapists with self-reported hostile and controlling introjects showed the greatest technical adherence. This finding is of concern because it has previously been shown that these therapists are most prone to engage in countertherapeutic interpersonal relationships (Henry et al., 1990; Henry, Schacht et al., 1993). Henry, Schacht et al. (1993) suggest the possibility that those hostile and controlling qualities that may allow some therapists to perform best in terms of adherence may also lead to other problems. They add that if this is in fact true, such a relationship would "work against any linkage between manualized adherence and improved therapeutic outcomes" (p.446). Henry, Schacht et al. (1993) concluded that their findings are not unique because the research community has, to a large extent, failed to show improved outcome via protocol adherence.

In these two studies, greater frequency in the implementation of TLDP interventions equaled greater adherence. By our definition, this would appear to coincide with amount, not adherence. It is doubtful that the TLDP manual used by the Vanderbilt group would instruct therapists to apply interventions as often as possible. If this is true, we can question Henry et al.'s conclusion that manualized adherence works against improved therapy outcome via countertherapeutic therapist interpersonal behaviours. Rather, it appears that amount of TLDP therapy strategies is significantly related to these countertherapeutic therapist variables. Therapist competence also seems questionable

because the Henry group (1993) reported that the therapists seemed somewhat mechanical and interventions were often ill-timed, giving the impression of a less-than-competent delivery of treatment. Indeed, Henry, Strupp et al. (1993) commented that although treatment was delivered (therapists adhered to the manual), the therapy did not always occur (the therapists did not deliver the therapy competently). Perhaps the countertherapeutic therapist behaviours were related to amount and therapist competence and not an effect of manualized adherence.

Butler, Henry, and Strupp (1995) assessed the relationships between the two VTTS subscales and measures of the therapy process and overall competence. In this study, the relationships between the Interviewing Style and the Specific Strategies subscales of the VTTS, the Therapist Negative Attitude, Therapist Warmth and Friendliness, and Therapist Exploration subscales of the VPPS, and competence ratings by supervisors were examined. It was found that Negative Therapist Attitude and Therapist Warmth and Friendliness were not significantly related to the VTTS subscales. Thus interpersonal manner, as represented by these two VPPS subscales, is not related to either Interviewing Style or Specific Strategies. Both VTTS subscales, however, correlated significantly with Therapist Exploration. Interviewing Style correlated most strongly ($r = .51$) with Therapist Exploration, while the correlation with Specific Strategies was $r = .35$. Butler, Henry, and Strupp note that the stronger correlation between Therapist Exploration and Interviewing Style makes sense because they both reflect general technique, while Specific Strategies, as the name implies, reflects more strict adherence to the TLDP manual. Supervisors' ratings of competence correlated

strongly and significantly (r = .72) with Interviewing Style, though it did not correlate significantly with Specific Strategies. Butler and colleagues conclude that the Psychodynamic Interviewing Style subscale of the VTTS is sensitive to general, technical competence. As well, they suggest that adherence to specific strategies is not necessarily the same thing as competence. They conclude that their findings are consistent with Schaffer's (1982) view that therapist technique, competence, and interpersonal manner are somewhat independent dimensions.

Luborsky et al. (1985) developed an index of purity, which they applied to three manual-guided therapies (drug counseling, supportive-expressive, and cognitive-behavioural) used to treat a population of opiate addicts. Consistent with the definition above, purity reflected the proportion of prescribed therapy strategies relative to all interventions present in treatment. From each of the three treatments, they sampled 15-minute segments taken from the last 20 minutes of randomly selected sessions. Using a 5-point scale ranging from "none" (1) to "very much" (5), experienced judges rated therapy segments on the extent to which core elements specified by the manuals were present in the session. Luborsky et al. found that the higher the therapists' level of purity in supportive-expressive (SE) and cognitive-behavioral (CB) therapies, the better the patients' outcome in the areas of drug use, legal status, employment, psychological status, depression, and symptom distress. This relation was significant even within caseloads of individual therapists. There was no significant relationship between purity and better therapy outcome in drug counselling (DC). Luborsky et al. also found that the amount of SE therapy qualities was significantly related to outcome in all three treatment groups. In

addition, it was reported that in all treatment groups, the helping alliance was more highly correlated with positive outcome than was purity. This finding led the Luborsky group to suggest that "the therapist's ability to form an alliance is possibly the most crucial determinant of his effectiveness" (p. 610). Furthermore, Luborsky et al. speculate that once the helping alliance is established, therapists achieve their effectiveness by providing a pure therapy. This speculation seems to imply that the helping alliance must reach some criterion level before purity can have an effect on outcome.

Luborsky et al. report that the more pure a therapy is, the better the outcome. This relationship was true only for SE and CB therapies, and not for DC treatment. Luborsky et al. also report a significant relationship between amount of SE therapy qualities and positive outcome in all treatment groups. This presents the possibility that perhaps amount of SE qualities was confounded with purity in the SE group. However, the possibility of amount of SE qualities being confounded with purity cannot exist in the CB group because increasing amounts of SE qualities would lower the purity of CB technique. Thus, in the CB group, we have two seemingly incompatible findings: improved therapy outcome being related to amount of SE qualities, and to purity of CB therapy.

Winston et al. (1987) developed an adherence scale for two manual-guided brief psychodynamic psychotherapies: Short-Term Dynamic Psychotherapy (STDP) and Brief Adaptation-Oriented Psychotherapy (BAP). According to the definitions above, Winston et al.'s (1987, 1992) measure of fidelity is what we have defined as adherence. Their ratings of fidelity focused on the degree to which the interventions provided by the

therapist conformed to the instructions of the treatment manual. A 22-item scale, reflecting the major technical requirements for each psychotherapy, was devised. The scale was anchored as much as possible to observations of concrete behaviours. Each item was rated on a 5-point scale, with higher ratings indicating greater adherence. Thirteen patients, each having a DSM-III Axis II personality disorder diagnosis, were involved in this study. Four trained judges rated four randomly selected entire sessions for all 13 patients. Winston et al. used Cronbach's Generalizability Coefficient to rate reliability. This coefficient is defined as the expected correlation between two scores that belong to the collection of possible scores for a particular scale (Cronbach, 1970). The overall reliability among the raters was .83. The validity of the fidelity scale was tested by using a videocoding method that focused on activity level and amount of therapist attention to interpersonal issues. It was thought that therapists differing in their degree of adherence should differ in their emphasis on these variables. Winston et al. reported a nonsignificant relationship between adherence and activity level. They did, however, note a significant positive relationship between adherence and amount of therapist attention to interpersonal issues (Pearson $r = .74$, $p<.0005$). This significant finding suggests the possibility that the adherence scale is measuring meaningful therapist activity in the interpersonal area (Winston et al., 1987). They also looked at the relation of adherence to outcome. Although no significant relationships were found, they did note a trend between greater adherence and better outcome (no statistics provided by authors). This relationship may have attained significance with a larger sample of therapy cases.

The Winston group has also developed an adherence scale that can be applied to

five different brief psychotherapies. In one study, Winston et al. (1992) used this scale to assess adherence to a specific dynamic therapy, Brief Supportive Psychotherapy (BSP), and the relationship between adherence and patient outcome. A sample of 10 patients, each with a diagnosis of personality disorder primarily of the DSM-III-R Cluster C type, was used for this study. Of the 20 items on the adherence scale, only three applied specifically to BSP. These three items were: 1) avoiding and alleviating anxiety; 2) self-esteem focus; and 3) the use of a didactic approach. Three pairs of experienced clinicians served as raters. The fifth session of each therapy was rated (all sessions were videotaped). Rater reliability was calculated using the intraclass correlation coefficient (ICC: 3,k). The overall mean reliability for the three pairs of raters was .89. Winston et al. examined the correlation between adherence and outcome while controlling for therapeutic alliance and patient severity. Therapeutic alliance was controlled because they felt that a good alliance may produce a positive outcome in the face of poor adherence, thereby, confounding the relationship between outcome and adherence. The correlation between adherence and outcome while controlling for patient severity was .33. The correlation between these two variables while controlling for both patient severity and the therapeutic alliance was .51. Neither correlation was significant, yet the size of these correlations, according to Winston et al., is promising.

Winston et al.'s (1987, 1992) measures of fidelity appear to reflect what we have defined as adherence, i.e., the degree to which the therapist conforms to the manual. Purity, amount, and competence were not monitored, however, leaving open the possibility that perhaps the effect of any or all of these variables confounded the

adherence-outcome relationship that the Winston group was investigating. Winston et al.'s (1987, 1992) failure to find a significant relationship between adherence and outcome could also have been a result of their very small sample sizes.

The Penn Adherence/Competence Scale for Supportive-Expressive dynamic psychotherapy (Barber & Crits-Christoph, 1996) is a unique, newly-developed scale. The PACS-SE, consisting of 45 items, was developed as both an adherence and competence measure. The PACS-SE is organized into three subscales: 1)general therapeutic skills; 2)supportive skills; and 3)expressive skills. The general skills subscale includes features that are relevant to many forms of psychotherapy. The supportive subscale addresses features of therapists' behaviours which are assumed to be regarded by patients as supportive. The expressive subscale refers to techniques that are more specific to interpretive psychotherapy, particularly to SE dynamic therapy. The subscales that are specific to SE therapy are the supportive and expressive scales.

In a study to determine the psychometric properties of the PACS-SE, Barber and Crits-Christoph (1996) used a sample of 33 patients with a Research Diagnostic Criteria (RDC) diagnosis of major depression who were treated with time-limited supportive-expressive psychotherapy. In addition, seven depressed patients treated with cognitive therapy (CT) were used to examine whether the inclusion of ratings of sessions from another treatment condition increases rater reliability, and to ascertain the scale's ability to differentiate between SE therapy and another form of therapy. Two Ph.D.-level clinical psychologists trained as raters independently rated a total of 91 entire audiotaped sessions. Using a 7-point Likert-type scale, the rater considered both how much the

therapist used a specific technique (adherence) and how well the behaviour was performed (competence). Adherence and competence were thus assessed using the same items on the scale.

Rater reliability of adherence ratings for the subscales and total scale for SE therapy alone, estimated by the intraclass correlation coefficient (2,2), were: .58 for general techniques, .36 for supportive techniques, .71 for expressive techniques, and .66 for the total scale. When SE and CT sessions were combined, reliabilities were: .56 for general techniques, .35 for supportive techniques, .74 for expressive techniques, and .68 for the total scale. Corresponding rater reliabilities for competence ratings were: .48 and .79 for general techniques, .41 and .60 for supportive techniques, .35 and .67 for expressive techniques, and .42 and .73 for the total scale. These data indicate rather poor rater reliability for the supportive subscale for both adherence and competence ratings. Internal consistency of the total scale, as indicated by Cronbach's alpha, was .92 for adherence and .95 for competence. Correlations between adherence and competence ratings were .30, .50, .60, and .58 for the general therapeutic, supportive, expressive, and total scales, respectively. Because the rater reliability of the supportive subscale, in particular, was low, one must be cautious when interpreting the meaning of some of these correlations. It was found that adherence and competence scores of the total scale significantly distinguished between the two forms of therapy.

In addition to determining the psychometric properties of the PACS-SE, Barber and Crits-Christoph explored whether a number of patient and process variables were related to therapists' adherence/competence ratings. Barber and Crits-Christoph found

that adherence/competence scores at session three were not predicted by pretreatment measures of depression, general psychological health, or length of depressive episode. Furthermore, they found that the presence or absence of personality disorders did not affect adherence/competence ratings. Concurrent level of depression at session three was also not significantly associated with adherence/competence scores. This evidence, they claim, indicates that patients' psychiatric severity does not determine the therapist's ability to adhere to a manualized treatment or his/her ability to deliver the therapy competently. An examination of the relationship between adherence/competence ratings for supportive and expressive techniques and a self-report measure of the alliance, as measured by the Helping Alliance Questionnaire, failed to show any significant relationships.

Barber, Crits-Christoph, and Luborsky (1996) used the PACS-SE to investigate the effects of therapist adherence and competence on patient outcome. A sample of 29 RDC depressive patients was used in this study. Two Ph.D.-level clinical psychologists served as raters. The third session of each therapy was rated. All sessions were audiotaped. Rater reliability was calculated using the intraclass correlation coefficient [ICC (2,2)]. Rater reliability was .38 for adherence supportive; .70 for adherence expressive; .50 for competence supportive; and .69 for competence expressive. Barber et al. found that adherence to supportive or expressive techniques did not predict change in depression. They did find that competent application of expressive techniques significantly predicted favourable outcome, while competent use of supportive techniques did not. Competent delivery of expressive techniques predicted subsequent change in

depression even after controlling for adherence to those techniques and pretreatment psychological health. Change in depression from intake to session three predicted adherence to expressive techniques, in that the less symptomatic improvement the less adherence to expressive techniques was evident in session three. Barber et al. concluded that it is the competent use of expressive techniques rather than their frequency of use that predicts favourable outcome. Furthermore, commenting on the association between early symptomatic improvement and increased adherence, Barber et al. suggest that the more the patient benefits from treatment, the easier it is for the therapist to adhere to the supportive-expressive treatment manual. Considering how low the rater reliability was for the supportive subscale of the PACS-SE, the validity of some of the findings is questionable.

It is clearly indicated that the frequency of technique provided defines adherence on the PACS-SE. According to our definitions above, this would qualify as amount rather than adherence. Describing their scale, Barber and Crits-Christoph (1996) note that their measure of adherence considers the frequency scores of multiple techniques, and that a therapist focus on only one or a few techniques would result in a low overall adherence score. This rationale, however, seems to imply that to be adherent to the treatment manual, the therapist must implement as many of the prescribed techniques as often as possible. Such instruction seems unlikely.

The PACS-SE served as a model for a new scale that was designed to measure adherence and competence in supportive-expressive dynamic psychotherapy for the treatment of cocaine dependence (ACS-SEC; Barber, Krakauer, Calvo, Badgio, & Faude,

1997). In addition to addressing techniques from Luborsky's general SE manual (1984), this scale included items that focused on specific interventions for cocaine addiction. The ACS-SEC is also distinguished from the PACS-SE in its distinction between two aspects of therapist competence: quality and appropriateness. Quality refers to the skill with which an intervention is delivered, and appropriateness addresses the extent to which the frequency of an intervention is appropriate within the context of the session (Barber et al., 1997). The ACS-SEC consists of 82 items and includes three subscales: Supportive (13 items), Expressive (31 items), and Cocaine Abuse (11 items). Sixty-four of the 82 items are rated for adherence, quality, and appropriateness. Ratings are made on a scale from 1 to 7, with higher ratings indicating greater adherence or competence.

In a study that examined the initial reliability and validity of the ACS-SEC, Barber et al. (1997) utilized 52 audiotapes from three treatment modalities: supportive-expressive, cognitive, and individual drug counseling. Rater reliability for the three subscales and the Total Scale score, estimated by the ICC (2,2), ranged from .74 to .89 for adherence, from .29 to .68 for appropriateness, and from .33 to .42 for quality. Separate Cronbach alphas were calculated for each subscale and the Total Scale. The coefficients ranged from .72 to .92. Correlations between each of the subscales for adherence and appropriateness ranged from .56 to .94. Correlation between each subscale for adherence and quality ranged from .37 to .90. Correlations between appropriateness and quality ranged from .87 to .96. Adherence scores were not significantly related to patient difficulty. Adherence on the supportive and expressive subscales, however, was significantly associated with patient self-therapeutic ability. Patients who spontaneously

used SE techniques on their own and generated material for work in therapy also had therapists who utilized prescribed SE treatment interventions. Adherence on the supportive and expressive subscales was also significantly associated with clinicians' ratings of the Global Assessment of Functioning scale. Barber et al. suggest that therapists responded to patients' increased psychiatric severity with higher levels of SE technique. The ACS-SEC demonstrated adequate rater reliability for adherence ratings, while those for competence were relatively poor. The internal consistency for each subscale was high for adherence and competence ratings. The scale also showed that although there is some overlap in the ratings of adherence and competence, they each seem to address different constructs.

Studies that have used indirect methods to infer adherence have also found mixed results with regard to its relation to treatment outcome. Lafferty, Beutler, and Crago (1989) inferred therapist adherence from the Therapist Orientation Questionnaire, which measures therapists' beliefs about what is desirable in therapy. They found that therapist adherence was not related to treatment outcome. Their method of addressing therapist adherence, however, is of questionable objectivity and validity, and thus it is difficult to place much weight on their finding. A meta-analytic study by Robinson, Berman, and Neimeyer (1990) of treatment outcome research using monitoring procedures (i.e., video and audio tapes and observers to ensure proper treatment delivery) and treatment manuals found that these did not increase therapeutic efficacy or allow for a finer differentiation of the relative effectiveness of treatments. It can be assumed that the use of treatment manuals and monitoring procedures increased therapists' adherence to the treatment

protocol; therefore, it is possible that increased adherence may not be related to more favourable treatment outcome. In a study that examined the effects of therapist training and experience on therapy outcome, Burlingame, Fuhriman, Paul, and Ogles (1989) found that patients of more intensely trained therapists showed the greatest improvement. Although a specific treatment manual was not used, training sessions describing therapy strategies were conducted. As well, a written copy of the therapy model was distributed to the therapists. It may be inferred from these procedures that more intensely trained therapists were perhaps more adherent to the therapy model; thereby, suggesting the possibility of a relationship between therapist adherence and favourable patient outcome. However, Binder (1993), in a review of treatment outcome studies, concludes that "in general, technical adherence per se has been an inconsistent and weak predictor of positive treatment outcome" (p.307).

Summary. Despite the apparent desirability of measuring therapist adherence in clinical studies, there is a remarkable lack of established findings on the topic. Most studies that have examined adherence have focused only on documenting that the different therapies differed as intended. As shown in the review above, the few reports that have studied the effect of therapist adherence on therapy outcome offer mixed conclusions. Some of these findings seem questionable because of uncertainty as to which construct was actually measured. In many instances, it appears that researchers may have measured amount of technique rather than adherence per se. Researchers often measured how much prescribed therapy was provided and then equated more

interventions with increased adherence. This may in fact reflect what the treatment manual instructed therapists to do. It is questionable, however, that a psychotherapy manual would instruct therapists to implement specific techniques as often as possible. Perhaps the differences in the constructs measured by the different adherence scales may account for some of the variation in the reported findings. More studies investigating the relation of adherence to treatment outcome are needed to discern any sort of trend.

There have been studies that focused directly on the effect of amount of technique on the process and outcome of psychotherapy. An example of such a study is that of Piper, Azim, Joyce, and McCallum (1991). In this investigation, Piper et al. used a content categorization system, called the Therapist Intervention Rating System (TIRS), to measure the frequency of a number of interpretive and non-interpretive techniques present in sessions of dynamic individual psychotherapy. Important findings from this study were inverse relationships between the proportion of transference interpretations and both the therapeutic alliance and favourable therapy outcome for patients with a history of high quality of object relations. These findings suggest that there is a potential for negative treatment effects when high levels of transference interpretations are used with certain types of patients.

The field of psychotherapy research is moving farther away from a general focus on whether psychotherapy works to a more specific focus on <u>how</u> psychotherapy works. This movement has stimulated a number of studies that have investigated in-session changes in patient states, therapist behaviour during treatment, and patient-therapist interactions. The ultimate goal of these efforts is to better understand the mechanisms of

change in psychotherapy. Investigations that have attempted to find relationships between the process and outcome of various psychotherapies have suggested that the climate of the therapeutic relationship, commonly referred to as the therapeutic alliance, is a robust predictor of therapy outcome. Given the consistent evidence supporting the relationship between the alliance and outcome, it seems appropriate to include the alliance as a variable to be measured in psychotherapy outcome studies. The following section is a review of the concept of the therapeutic alliance. This will foreshadow the inclusion of the alliance as an important process variable in the current study.

Therapeutic Alliance. The therapeutic alliance has emerged as a key concept in contemporary psychotherapy research. The term "alliance" represents the collaborative working relationship between the patient and therapist in psychotherapy. Clinicians and clinical researchers have argued that a strong alliance is important to the process and outcome of psychotherapy. Researchers seeking to discover the variables that promote change in therapy have made the alliance a cornerstone of their research. This work has led to a growing body of evidence supporting the association of alliance to favourable treatment outcome. The consistency and strength of this relationship suggests that it is not a mere epiphenomenon of the treatment process (Gaston, 1990), but rather it seems to possess therapeutic qualities in its own right.

Most studies have focused on the simple and direct relation of alliance to outcome. Consequently, less emphasis has been given to defining the specific components of the alliance, or to examining the operation of the alliance relative to other

in-session variables (Svartberg & Stiles, 1994). Svartberg and Stiles (1994) identify two hypotheses that attempt to explain the roles played by the alliance and technique in relation to treatment efficacy. The first, developed within a client-centered framework, views the alliance as therapeutic in its own right. This hypothesis postulates that the alliance is sufficient to effect change in therapy, over and above the effect of technique. The second hypothesis, originating from the psychoanalytic tradition, views the alliance as a prerequisite for technical interventions to work effectively. The alliance, according to this hypothesis, creates a context in which techniques operate to bring about change. Thus, the alliance plays an interactive role with technique. To date, little research has been conducted in this area and these hypotheses remain to be tested. Below is a brief review of theoretical and empirical efforts in respect to the alliance.

The concept of the therapeutic alliance has its origin in early psychoanalytic theory. Freud differentiated between the realistic, collaborative aspects of the therapeutic relationship and the more distorted aspects. He discussed the value of the analyst's maintenance of interest in and "sympathetic understanding" of the patient to allow the healthy part of the patient to attach to the analyst (Freud, 1912/1953). Freud (1913/1953) added that because of this supportive attitude of the analyst, the patient would unconsciously link the analyst with elements of past nonconflicted trusting relationships with parental figures. Freud wrote that the friendly and affectionate aspects of the transference are the "vehicle of success" in therapy.

Since that time, a number of authors (e.g., Bowlby, 1988; Greenson, 1965; Zetzel, 1956) have offered their conceptualizations of the alliance. As might be expected,

agreement has yet to be attained. Thus a mutually agreed upon meaning of what the alliance actually represents remains to be determined.

Bordin (1979, 1994) offered a pantheoretical formulation of the therapeutic alliance. He defined the alliance as the active relational element in all change-inducing relationships. His formulation emphasizes the role of the patient's positive collaboration with the therapist against the patient's presenting problems. Bordin contends that the alliance has three constituent elements: Goal, Task, and Bond. Goal refers to the patient and therapist mutually endorsing and valuing the aims (outcomes) of therapy. Task refers to the specific activities that the partnership will engage in to instigate or facilitate change. The patient and therapist must perceive these tasks as relevant and effective, and each must accept the responsibility to perform these tasks. Bond refers to the positive personal attachments between patient and therapist. The bond grows out of their experience of association in a shared endeavour, and is expressed and felt in terms of liking, trusting, mutual respect, and a sense of common commitment and understanding in the shared activity.

An ambitious effort to summarize our theoretical understanding of the alliance was made by Gaston (1990). In reviewing the various definitions of the alliance, she identified four dimensions, each representing an independent, yet compatible component of the alliance. They are: a) the patient's affective relationship to the therapist; b) the patient's capacity to purposefully work in therapy; c) the therapist's empathic understanding and involvement; and d) the patient-therapist agreement on the goals and tasks of treatment.

Empirical evidence has consistently provided support for the predictive validity of the therapeutic alliance in psychotherapy outcome research (e.g., Gaston, Marmar, Gallagher, & Thompson, 1991; Horvath & Greenberg, 1989; Krupnick, Collins, Pilkonis, Elkin, Simmens, Sotsky, & Watkins, 1994; Morgan, Luborsky, Crits-Christoph, & Salomon, 1982). These findings have been observed across a variety of psychotherapy approaches, varying symptomatic disorders, different measurements of alliance, and different sources of information (patient, therapist, and clinical judges). This research supports the importance of the therapeutic alliance in the psychotherapy process. However, there is considerable variation across theoretical perspectives in the degree to which the alliance is presumed to influence outcome. Despite the large body of research that has investigated the role of the alliance in psychotherapy, only one study (Barber & Crits-Christoph, 1996) has looked at the relationship between the therapeutic alliance and therapist adherence, and as reported in the previous section, no significant relationship was found.

DESIGN OF PRESENT PROJECT

As a progression from previous work in the field, the current study will investigate the relation that adherence and a number of related constructs (i.e., amount and purity) have with the therapeutic alliance and treatment outcome. This addresses a virtually untouched area of research - the relationship between adherence and the therapeutic alliance. It also addresses the question of whether adherence or a related construct is related to outcome of therapy. Essential to the success of such an

investigation is the development of a valid and reliable measure of therapist adherence.

The project comprises three related studies. They are described in chronological order. The first investigates the psychometric properties (rater reliability, internal consistency, and factor structure) of a newly-developed Adherence Scale in a sample of psychiatric outpatients who received individual psychotherapy. The second study is a cross-validation of the first with an independent sample. The third study tests hypotheses about the relationships among therapist adherence, amount of therapy, purity of therapy, therapeutic alliance, and therapy outcome. Competence was not assessed in this study because, at the time that the study began, a reliable measure of competence was not available. The project uses a database from two randomized, clinical trial investigations (Piper et al., 1990; 1997). The samples include psychiatric outpatients who presented with difficulties concerning depression, anxiety, self-esteem and interpersonal relations, and who experienced recurrent internal conflict. The use of independent samples in the project follows Beutler's (1989) recommendation to use separate samples for scale development and hypothesis testing in order to avoid bias due to correlated error. Two short-term, individual, psychodynamic psychotherapies (supportive, interpretive) are considered in these three studies. Specific techniques for each therapy are outlined in separate treatment manuals. The study attempts to contribute to the methodological and theoretical development of manual use in psychotherapy.

HYPOTHESES

Interpretive Therapy

Time-limited, short-term, interpretive individual psychotherapy emphasizes a passive-receptive approach, interpretive interventions, and attention to transference. A strong therapeutic alliance and a problem focus are regarded as important. The interpretive therapy manual does not prescribe specific quantitative amounts of the basic components of the therapy, e.g., interpretations. The message conveyed by the interpretive manual is that there should be an emphasis on interpretive components relative to supportive components, while avoiding over-emphasis on the prescribed interventions. The scale designed for the present study reflects this perspective on adherence.

Adherence and Alliance. The relationship between adherence and alliance is hypothesized to be positive. Low adherence will be related to a weak alliance. One explanation is that a weak alliance contributes to low adherence. The therapist is attentive to the patient's state and adjusts his interpretive work accordingly. When the alliance is weak, the therapist is reluctant to emphasize interpretive features for fear that the patient will not be receptive or will not be able to tolerate the intensity of the interpretive process.

A reverse causal explanation is that low adherence results in a weak alliance. If the therapist does not emphasize interpretive features (e.g., does not address the transference or defenses), the therapy will tend to be unstimulating and unsatisfying to the

patient. Thus, the patient will be less inclined to work in a collaborative way with the therapist.

Similar explanations can be offered for the relationship between high adherence and strong alliance. A strong alliance can facilitate high adherence. The sense of security and shared commitment of a strong alliance enables the patient to tolerate an intense and in-depth exploration of transference feelings and defensive states. Alternatively, high adherence can promote a strong alliance. With the increased emphasis on a passive-receptive approach, the therapist is regarded as a careful and empathic listener. This enhances the patient's sense of collaboration and willingness to work.

Adherence and Outcome. Adherence to the interpretive protocol is expected to have a direct linear relationship with therapy outcome. Interpretive psychodynamic psychotherapy requires that the therapist explore the patient's uncomfortable emotions, examine the transferential relationship with the therapist, and interpret the patient's defenses in order to resolve the patient's internal conflicts. High adherence to the interpretive protocol will be related to a positive outcome. With a greater relative emphasis on interpretive features, the therapist helps the patient achieve insight. This heightened self-awareness allows the patient to discern how unconscious conflicts shape his unwanted behaviour, allowing for a decrease in subjective distress.

Interpretive therapy is very much a collaborative activity. As the therapist provides greater emphasis on interpretive features, the patient can confront disowned aspects of himself and his relationships, and gain a deeper understanding of his problems.

The patient becomes able to understand and interpret his own experience and behaviour. Thus, therapy outcome will be increasingly favourable as the patient learns his own way of understanding and working at his problems.

The therapeutic alliance has consistently been found to be positively related to therapy outcome. As described above, adherence to the interpretive protocol is expected to be related to a strong alliance. It is therefore anticipated that the strong alliance associated with high adherence will also contribute to favourable therapy outcome.

Low adherence to the interpretive protocol will be related to poor therapy outcome. Interpretive theory supposes that the therapist's emphasis on the features described above is necessary for a favourable therapy outcome. In the absence of such emphasis (i.e., low adherence), the patient's internal conflicts will not be adequately addressed, and outcome will thus be relatively poor.

Amount, Purity, and Alliance. Although conceptualized to be distinct constructs, the mechanism of action of amount and purity are expected to be quite similar, thus the relationship of each with alliance and outcome are anticipated to also be similar.

Amount and purity of interpretive technique are hypothesized to each have a curvilinear relation with alliance. Low to moderately high interpretive emphasis (i.e., low-moderate amount, low-moderate purity) will facilitate a strong alliance. With increasing emphasis on features that focus on the therapeutic relationship and the patient's experience of others outside the treatment situation, the patient will become aware of maladaptive patterns of interpersonal behaviour. This will enhance the patient's

capacity to relate to the therapist as a collaborator in a joint exploration for insight rather than as a figure of past relationships. Furthermore, increasing emphasis on interpretations of the patient's defenses and underlying conflicts will stimulate the patient's interest in the interpretive work to be done in therapy.

An alternate explanation is that a strong alliance results in increasing emphasis (i.e., increasing amount and purity) on interpretive features. As the alliance becomes stronger, the patient is more willing to examine the feelings, thoughts, and fantasies he experiences. When the therapist senses the patient's enhanced capacity to bear the intensity of the interpretive process, he will provide an increasing emphasis on interpretive features.

Very high amount of emphasis on and purity of interpretive features will be related to a weak alliance. One explanation is that a very high emphasis on interpretive features will weaken the alliance. Many interpretive interventions provoke anxiety in the patient. The therapist's silence and pressure on the patient to speak may also be stressful for the patient because he may feel that the therapist's passive approach reflects a lack of empathy. Too much interpretation of the patient's avoidance or minimization may be perceived by the patient as an attack. Furthermore, the patient may sense the frequent and consistent interpretation of transference and resistance as blaming rather than helpful.

Conversely, a weak alliance may result in very high amounts of interpretive emphasis and very high purity. The therapist may sense a weak alliance and provide a very high emphasis on interpretive features in order to stimulate the patient and strengthen the alliance. The therapist attempts to dissolve the resistance through

interpretations. However, without a sense of security and a willingness to tolerate distressful interpretive work, the patient's anxiety will escalate to an intense level. To protect himself from this anxiety, the patient will revert to pathological defenses, thus further weakening the alliance.

Amount, Purity, and Outcome. Curvilinear relationships between amount and purity of interpretive technique and outcome are hypothesized. Low to moderately high emphasis on interpretive features will facilitate productive work and favourable therapy outcome. The interpretation of transference is critically important to a positive outcome in interpretive therapy. With greater emphasis on interpretive features, the therapist interprets the transference pattern throughout the course of therapy as it relates to the patient's outside relationships, the therapeutic relationship, and antecedent relationships with family members. Once the patient sees the pattern come up again and again in different contexts, it becomes less alien, and the patient gains greater mastery over it. The therapist also offers more interpretations of the patient's wishes and defenses. Increased interpretations provide the patient with a greater understanding of the nature of his defenses and underlying wishes. This understanding, or insight, will facilitate a positive outcome.

Interpretive therapy progresses through the mutual work of therapist and patient. As the therapist provides increasing emphasis on interpretive features, he offers new formulations of unconscious meaning and motivation. The patient can use these clues and become more able to interpret his own behaviour. The patient will then begin to

master conflicts and traumas as he comes to place them in an historical perspective and understands his own part in unnecessarily perpetuating them. Furthermore, consistent with findings of previous research, the strong alliance which is expected to be related to increasing amount and purity of interpretive emphasis is also expected to facilitate favourable therapy outcome.

However, a very high amount of emphasis on and purity of interpretive features will each be related to poor therapy outcome. As noted above, a high interpretive emphasis will escalate the patient's anxiety to an intense level and the patient will revert to pathological defenses to protect himself. This results in not only a weak alliance, but also is a detriment to resolving the patient's internal conflicts. If the patient maintains pathological defenses and has a minimal sense of collaboration with the therapist, little interpretive work will be accomplished in therapy.

Supportive Therapy

Time-limited, short-term supportive individual psychotherapy emphasizes an active approach, supportive interventions, and attention to the patient's conscious presenting problems. A strong therapeutic alliance and a problem focus are also regarded as important. The manual for supportive therapy does not prescribe specific quantitative amounts of emphasis on the basic components of therapy, e.g., gratification. The message conveyed by the supportive manual is that there should be an emphasis on supportive interventions relative to interpretive interventions, while avoiding over-emphasis on the prescribed interventions. The adherence scale used in this study reflects

this condition for adherence.

Adherence and Alliance. A direct linear relationship between adherence and alliance is hypothesized. One explanation for this relationship is that increasing adherence facilitates a strong alliance. Many features of supportive therapy (e.g., praise, gratification, problem solving, etc.) are effective for building a strong alliance. Greater relative emphasis on these features will provide the patient with a warm, gratifying relationship, as well as a relationship that promotes collaboration between patient and therapist.

A reverse causal explanation is that a strong alliance results in increasing adherence. The sense of security and shared commitment of a strong alliance enhances the patient's willingness to collaborate with the therapist and trust the therapist's guidance. The therapist is attentive to the patient's state and increases his emphasis on supportive features accordingly.

Adherence and Outcome. Adherence to the supportive protocol is expected to have a direct linear relationship with therapy outcome. The aim of supportive therapy is to reduce or relieve the intensity of manifest and presenting symptoms, distress or disability, and to reduce the extent of behavioural disruption caused by the patient's psychic disturbances. The strategy in supportive therapy is for the therapist to actively participate with the patient in establishing goals and offering a variety of reinforcements and responses to encourage the patient to achieve them. The therapist uses himself as a model

for coping, bolsters the patient's adaptive defenses, and provides guidance. High adherence to the supportive protocol will facilitate a positive therapy outcome. With a greater relative emphasis on supportive features, the therapist helps improve the patient's adaptation to presenting problems and difficulties.

The therapist and patient both have a crucial role to play in supportive therapy, and a positive outcome depends upon the effort of both. As the therapist provides a greater emphasis on supportive features, the patient incorporates new behaviours into his daily functioning, pursues alternative solutions to presenting problems, and evaluates the consequences of each. The patient becomes able to make realistic and valid choices to effect change and resolution of difficulties presented to him.

The above section on the therapeutic alliance describes the growing body of evidence supporting the association of a strong alliance to favourable treatment outcome. It is therefore expected, as consistent with previous findings, that the strong alliance, which is hypothesized to be related to increased adherence, will also contribute to positive therapy outcome.

Low adherence will result in relatively poor therapy outcome. Supportive theory contends that the success of therapy is contingent upon the therapist's emphasis on the supportive features described above. With minimal emphasis on these features, there is little relief offered to the patient, and the patient will thus remain distressed about the intensity and disruptiveness of his problems.

Amount, Purity, and Alliance. Amount and purity are each expected to have a curvilinear

relationship with alliance. Low to moderately high levels of each will be related to a strong alliance. One possible explanation for this is that increasing amount and purity will facilitate a strong alliance. As amount and purity of supportive therapy increase, there is a greater emphasis on supportive features (e.g., gratification, praise, problem solving, etc.) that are important for building a strong alliance. The patient will thus feel accepted by the therapist and gain a greater sense of a shared working relationship.

Conversely, a strong alliance may result in increasing supportive emphasis. The patient will have a sense of security and willingness to work with the therapist when there is a strong alliance. The therapist will be attentive to this and increase his emphasis on supportive features (i.e., provide a greater amount of and more pure supportive therapy) to satisfy the patient.

A very high supportive emphasis will be related to a weak alliance. One explanation of this relationship is that high emphasis on supportive features will weaken the alliance. A very high supportive emphasis will cause the patient to feel that his autonomy is being compromised. The patient will become resentful of the therapist and resist the therapist's efforts in an attempt to assert himself.

A reverse causal explanation of the high amount/purity-weak alliance relationships is that a weak alliance results in a very high supportive emphasis. The therapist may sense a weak alliance and thus provide a high emphasis on supportive features in an attempt to increase the patient's interest in therapy. However, without a sense of collaboration with the therapist, very high supportive emphasis will feel overwhelming to the patient and that the therapist is too controlling. This will diminish

the patient's sense of a shared working relationship with the therapist.

Amount, Purity, and Outcome. Curvilinear relationships between amount and therapy outcome and purity and therapy outcome are expected. Low to moderately high levels of each will facilitate favourable therapy outcome. Increasing emphasis on supportive features involves a greater focus on providing the patient with new direction and modes of action, enhancing self-esteem, and absolving the patient of responsibility for current difficulties. With a greater supportive emphasis, the patient's defenses are bolstered, his anxiety reduced, and his previous level of psychological functioning restored. In addition, the patient will incorporate advice, guidance, and alternative behaviours into his behavioural repertoire which will allow him to adapt to new situations and increase his tolerance for unalterable situations. Furthermore, the strong alliance expected to be related to increasing amount and purity is also anticipated, as previous research has supported, to contribute to favourable therapy outcome.

Very high amount and purity will each be related to poor therapy outcome. High emphasis on supportive features will make the patient feel that he has been subjugated into a dependent role by the therapist. The patient will feel that the therapist is over-controlling and pushing a lifestyle onto him. The patient will act contrary to what the therapist suggests in an attempt to assert himself. Thus, outcome will be poor.

Summary of Hypotheses

Adherence is expected to have a positive linear relationship with alliance and

outcome for each form of treatment. Amount of technique and purity of technique are each expected to have a curvilinear relationship with alliance and outcome. Accordingly, low to moderate levels of each will have a positive relation with alliance and outcome, and very high levels of each will have a negative relation with alliance and outcome. These curvilinear relationships are hypothesized for each form of treatment

METHOD

OVERVIEW

The current project consisted of three separate studies. The purpose of the first study was to develop a psychometrically sound adherence measure. This involved determining the psychometric properties (rater reliability, internal consistency, factor structure) of the newly-developed Adherence Scale. The second study was a cross-validation of the first with an independent sample. The purpose of the third study was to use the Adherence Scale to test a number of hypotheses regarding the relationships among adherence, amount of therapy, purity of therapy, the therapeutic alliance, and treatment outcome. These studies utilized pre-existing data from two controlled, clinical investigations of psychotherapy outcome (Piper, Azim, McCallum, & Joyce, 1990; Piper, Joyce, McCallum, & Azim, 1997).

The 1990 investigation by Piper et al. examined the effects of short-term dynamically-oriented individual psychotherapy (STI) and the patient characteristic quality of object relations on outcome in a controlled clinical trial involving 8 experienced therapists and 144 psychiatric outpatients. Therapists were trained to carry out treatment according to a therapy manual. The 1997 investigation by Piper et al. was a comparative, randomized clinical trial that studied the efficacy of interpretive (STI) and supportive (SUP) forms of short-term dynamically-oriented individual psychotherapy and the interaction of each form with the patient's quality of object relations and psychological mindedness. Eight experienced therapists (crossed with treatment) provided therapy for

171 psychiatric outpatients (144 completers, 27 drop-outs). Therapists were trained to carry out treatment according to therapy manuals.

Study 1 utilized 50 cases. Fourteen were randomly selected from Piper et al.'s 1990 investigation. The remaining 36 cases were chosen from cases involved in Piper and colleagues' 1997 investigation. Of these, 13 were drop-outs from the project. The average number of sessions that they attended was 6.46 (range = 1 - 13). Thirteen were "additional" cases. These were patients treated by back-up project therapists. Six were pilot cases and 4 were "atypical" cases. The latter were cases with unusual attendance patterns (e.g., patients who were absent for more than 6 sessions) and were not included as part of the 144-completer sample.

Study 2 of the current project involved 50 cases from Piper et al.'s 1997 investigation. These were chosen randomly from among the first 96 completers.

Study 3 utilized 144 cases, also from Piper et al.'s 1997 investigation. They included all of the therapy completers.

SETTING, PATIENTS, THERAPISTS, and THERAPY

Setting. Patients involved in the investigations had been referred from the Psychiatric Walk-In Clinic, Department of Psychiatry, University of Alberta Hospital Site, Edmonton, Alberta, Canada. The Clinic is part of a large, multifaceted psychiatric outpatient service that is located within a 600 bed university hospital. About 2000 initial assessments are conducted in the Clinic each year by a staff of 10 from the disciplines of psychology, social work, occupational therapy, and nursing.

Approximately 18% of the patients are offered some form of weekly psychodynamic psychotherapy (individual, couple, family, group). Other treatments, such as pharmacotherapy, intensive day treatment, and intensive evening treatment are also offered, and some patients are referred outside the Clinic. The patients in the investigations were regarded by the referrers as representative of the psychotherapy cases within the Clinic.

Patients. The samples of the three studies are described collectively in order to avoid redundancy. Specific demographic and diagnostic information for each of the samples are provided in Tables 1 through 3.

A total of 194 cases were involved in the project. Eighty-eight percent (range = 73% - 96%) of the patients received Axis I diagnoses according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-III, American Psychiatric Association, 1980 or DSM-III-R, American Psychiatric Association, 1987). Most of these were Mood (67%) and Adjustment (6%) disorders. Of the patients diagnosed with Mood disorders, 81% presented with major depression. Forty-four percent of the patients received an Axis II diagnosis, the majority of which were Borderline (21%), Obsessive-Compulsive (17%), and Avoidant (16%) personality disorders. With regard to comorbidity, 36% of the patients received Axis I and Axis II diagnoses. Forty-four percent of the patients received psychotropic medication, the majority (92%) receiving an antidepressant.

The average age of the patients was 33.2 years (SD = 9.7, range = 18-62). Sixty-three percent were women. Just under half (42%) were married or living with a partner,

37% had never been married, and 21% were separated or divorced. Sixty-two percent were educated beyond high school and 68% were employed.

Therapists. A total of 18 therapists, who had considerable experience practising supportive and interpretive forms of dynamic therapy, participated in the two previous investigations. Table 4 presents specific demographic data, the investigations in which each therapist originally participated, and the study of the current project that utilized data from each of the therapists. The therapists came from the disciplines of psychiatry, psychology, social work, occupational therapy, and nursing. Seventeen were White and one East Indian. Ten were female. The therapists' average age was 42.6 years (SD = 7.7, range = 34-65), and their average experience practising individual psychotherapy was 11.6 years (SD = 7.01, range = 3-35).

Therapies. Each patient received a form of short-term, time-limited, individual psychodynamic psychotherapy that emphasized interpretive or supportive features. Accordingly, these were labelled interpretive therapy (STI) and supportive therapy (SUP). Each therapy was described in a technical manual. The treatment contract and structural features were similar. Patients were scheduled for 20, once-weekly sessions of 50 minutes duration at a regular prearranged time. Punctual attendance was emphasized and missed sessions were not rescheduled. The therapists were paid by a third party.

The two forms of therapy were characterized by multiple supportive-interpretive technical features. Each feature, e.g., attempts to gratify patient, may be regarded as a continuum that varies in emphasis. The more that the therapist gravitates toward one end or the other, the more he/she is being supportive or interpretive on that feature. Using the

example above, a therapist who spontaneously offers praise and encouragement, and gratifies the patient's attempts to elicit approval from the therapist is working supportively. In contrast, a therapist who refrains from gratifying the patient and does not attempt to prevent or rescue the patient from experiencing uncomfortable emotions during the session is working interpretively.

The primary objective of interpretive therapy is to enhance the patient's insight about repetitive intrapsychic and interpersonal conflicts that serve to underlie and sustain the patient's difficulties. According to the STI manual, the therapist attempts to clarify the patient's underlying, largely unconscious conflicts as differentiated from his/her presenting complaints. An early task of the therapist is to construct a problem formulation consisting of a repetitive conflict involving similar objects (persons) that have resulted in similar maladaptive outcomes. This conflict is explored across the patient's current external relationships, the immediate relationship with the therapist, and past relationships with significant persons, e.g., parents. The therapist encourages the patient to explore uncomfortable emotions, and withholds immediate praise and gratification. Interpretation is emphasized relative to support. The therapist is active, interpretive, and transference-oriented, which is consistent with approaches described by Malan (1976) and Strupp and Binder (1984).

In supportive therapy, the primary objective is to improve the patient's immediate adaptation to his/her life situation. According to the SUP manual, the therapist attempts to clarify the patient's current life situation and presenting problems, but refrains from directly addressing his/her underlying conflicts. Alternative means of coping with current

problems are explored in a therapy relationship that provides immediate gratification and praise. Similar to STI, an early task of the therapist is to construct a psychodynamic problem formulation. The formulation enhances the therapist's understanding of the patient, specifies what is to be addressed (e.g., maladaptive outcomes), and specifies what is not to be addressed (e.g., unconscious wishes). Reflection, clarification, guidance, and praise are emphasized relative to interpretation. The person focus is upon contemporary people in the patient's life as opposed to early life figures or the therapist. The therapist is active, non-interpretive, and other-focused. These features are consistent with approaches described by Rockland (1989) and Werman (1984).

In order to facilitate understanding and use of the STI and SUP manuals, therapists participated in six-month training programs prior to taking cases in the studies. As part of training, therapists treated pilot cases and attended weekly seminars where session material was presented and technical principles were discussed. The weekly seminars continued throughout the data collection phase of the studies.

All therapy sessions were recorded. In addition to using treatment manuals and having therapists attend weekly seminars in order to ensure treatment fidelity, a content analysis of the therapists' interventions was conducted using the Therapist Intervention Rating System (TIRS; Piper, Debbane, de Carufel, & Bienvenu, 1987). All therapist statements from each session rated are assigned to one of nine categories that range from simple utterances (e.g. Mm Hm) to complex interpretations. In the 1990 and 1997 investigations by Piper et al., the TIRS was used with 8 and 6 sessions, respectively (approximately every third session beginning with session 3) for the first 64 therapy

completers. In the 1990 investigation, the average number of interventions per session was 44 and the average number of interpretations was 11. The average number of transference interpretations provided was 4.4, or 39% of all interpretations. The analysis confirmed that the therapists were active, interpretive, and transference-oriented.

In the 1997 investigation by Piper et al., 32 interpretive therapies and 32 supportive therapies were rated. For the interpretive therapies, the average number of interventions, interpretations, and transference interpretations provided per session were 74.5, 14.6, and 3.9, respectively. For the supportive therapies, the average number of interventions, interpretations, and transference interpretations provided per session were 172.2, 3.5, and 0.2, respectively. Comparison by t-tests revealed that in interpretive therapies, therapists were significantly less active [$t(62) = 5.52$, $p < .000$], more interpretive [$t(62) = 8.70$, $p < .001$], and more transference-oriented [$t(62) = 5.56$, $p < .001$] than therapists in supportive therapies. These findings were consistent with the orientations of the treatment manuals.

Piper et al.'s 1990 investigation (STI therapy vs. wait list control) provided considerable support for the efficacy of interpretive, short-term, time-limited dynamic psychotherapy. When compared with patients in a wait list control group, patients treated with STI therapy showed substantially greater improvement on a number of established outcome measures. The effect was evident in terms of statistical significance, magnitude of effect, and clinical significance. Piper et al.'s 1997 investigation (STI therapy vs. SUP therapy) demonstrated that both interpretive and supportive forms of short-term, time-limited dynamic psychotherapy were effective. Patients in both therapy groups

experienced improvement on a range of outcome variables as evidenced by criteria of statistical significance, magnitude of effect, and clinical significance. Patients in supportive therapy did not differ from patients in interpretive therapy on overall improvement.

MEASURES

Adherence Scale. The Adherence Scale (see Appendix A) is a 14-item measure that is used to quantify the degree of therapist adherence to the intended strategies of STI and SUP psychotherapies. It is applied by non-participant raters. The Adherence Scale was developed from the treatment manuals for STI and SUP therapies. Seven of the 14 items of the Adherence Scale represent supportive features. These are the odd-numbered items. The other 7 items represent interpretive features. These are the even-numbered items. The 14 items represent a set of multiple, supportive-interpretive technical features that characterize differences among dynamic psychotherapies. Each of these items is represented by a continuum and is rated on a 5-point Likert-type scale (0 = no emphasis, 4 = major emphasis). Emphasis represents not only the frequency with which an intervention was applied, but also the special weight the therapist placed upon an intervention over the course of the session.

Two subscale scores (supportive, interpretive) and one full-scale score are derived from the Adherence Scale. Each subscale score is calculated by adding the scores of the seven items that correspond to each of the two therapies. The subscale scores represent the quantity, i.e., amount of technique of each form of therapy. The range of scores is 0 -

28 with higher scores representing a greater amount of emphasis. Purity is calculated using the two subscale scores. It is calculated by dividing the subscale score of one therapy by the sum of both subscale scores. It is a ratio score (proportion) ranging from 0 to 1. Higher scores represent more "pure" therapy.

In the present project, operationalization of adherence needed to reflect three important features: 1) the characterization of the two psychotherapies using a set of continua, 2) the instruction of the therapy manuals to provide a relative emphasis on the prescribed technique, and 3) the assessment and correction for over-emphasis. The Full-Scale score is intended to be a measure of the relative emphasis on the two psychotherapies and is represented as a continuum. It is calculated using the following formula: Interpretive subscore + (28 - Supportive subscore). Thus, it is keyed in the interpretive direction. The range of scores is 0 - 56. Zero to 27 represents the supportive range of the continuum. Twenty-nine to 56 represents the interpretive range of the continuum. A score of 28 represents a therapy with equal supportive and interpretive emphases.

Through the use of therapy manuals and weekly therapist seminars, therapists were instructed to provide emphasis on interpretive or supportive techniques (depending on the designation of therapy), but to avoid over-emphasis, which can be counter-productive and elicit defensive patient reactions. Over-emphasis is evident in very low or very high Full-Scale scores. An adjustment method applied to the Full-Scale score was needed to correct for over-emphasis.

Two different adjustment methods were employed (Method A, Method B). Each method determined cutoff values. Scores beyond the cutoff values were defined as over-emphasis. Each method assigned a penalty for over-emphasis that was used to correct the Full-Scale score.

Cutoff values for Method A were determined for each treatment subsample (STI, SUP). The cutoff value for STI therapy was determined in the following manner. For each of the 72 cases, an average Full-Scale score was calculated across the nine rated sessions. Next, the mean (39.05) and standard deviation (3.78) of these 72 average Full-Scale scores were calculated. The cutoff value was one standard deviation above the mean Full-Scale score. The cutoff value was 42. Any Full-Scale score that exceeded 42 was defined as over-emphasis.

For SUP therapy, the cutoff value was determined as follows. For each of the 72 cases, an average Full-Scale score was calculated across the nine rated sessions. The mean (14.93) and standard deviation (3.49) of these 72 average Full-Scale scores were computed. The cutoff value was one standard deviation below the mean Full-Scale score. The cutoff value was 11. Any Full-Scale score that fell below 11 was defined as over-emphasis. For both STI therapy and SUP therapy, the penalty value for Method A was 0.5.

Cutoff values for Method B were also determined for each treatment subsample (STI, SUP). For STI therapy, the cutoff value was determined as follows. The mean and standard deviation of the Full-Scale scores from each of the nine rated sessions for each of the 72 cases were calculated. In other words, the mean (39.05) and standard deviation

(5.41) of 648 Full-Scale scores were computed. The cutoff value was one standard deviation above the mean Full-Scale score. The cutoff value was 45. Any Full-Scale score that surpassed 45 was defined as over-emphasis.

For SUP therapy, the cutoff value was determined in the following way. The mean (14.93) and standard deviation (4.74) of 648 (nine rated sessions x 72 cases) Full-Scale scores were calculated. The cutoff value was one standard deviation below the mean Full-Scale score. The cutoff value was 10. Any Full-Scale score less than 10 was defined as over-emphasis. For both STI therapy and SUP therapy, the penalty value for Method B was 1.5.

In sum, the cutoff values for Method A were based on average Full-Scale scores from each case, i.e., on the Full-Scale scores at the level of the whole therapy. For Method B, the cutoff values were based on the Full-Scale scores from each session for each case, i.e., on the Full-Scale scores at the level of the individual session. The adjustment to the Full-Scale scores was applied by the principal investigator of the current project, not by raters using the scale to assess therapy material. Each adjustment method was implemented in a similar manner.

Interpretive Cases. For each session rated, the number of points that the Full-Scale score exceeded the cutoff (42 for Method A, 45 for Method B) was tallied. These points were summed across all rated sessions, multiplied by the penalty value (0.5 for Method A, 1.5 for Method B), and the total was subtracted from the mean of the unadjusted Full-Scale scores. This final score represented the therapist's corrected degree of adherence over the course of therapy with that particular patient.

Supportive Cases. For each session rated, the number of points the Full-Scale score fell below the cutoff (11 for Method A, 10 for Method B) was tallied. These points were summed across all sessions that were rated, multiplied by the penalty value, and the total was added to the mean of the unadjusted Full-Scale scores. This final score represented the therapist's corrected degree of adherence over the entire course of therapy with that particular patient.

Conceptually, adherence, amount, and purity are distinct constructs. It was necessary to ensure that the operational representations of each were relatively independent. To determine this, the relationships among adherence (adjusted Full-Scale scores), amount (subscale scores), and purity, as well as the unadjusted Full-Scale score were examined using the Pearson product-moment correlation coefficient. The relationships were examined within each treatment subsample (STI, SUP). The mean and standard deviation of each predictor variable are provided in Table 5. As Table 6 shows, for interpretive treatment the relationships between adherence and amount, and adherence and purity were low and statistically non-significant. In contrast, the relationships between the unadjusted Full-Scale score, amount, and purity were high and statistically significant. Thus, the operationalization of adherence as the adjusted Full-Scale score was needed to achieve relative independence. The correlations between the unadjusted Full-Scale score and the adjusted Full-Scale scores (Method A, Method B) were very low and statistically non-significant. The relationship between amount and purity of interpretive technique was moderate and statistically significant.

For supportive treatment, Table 7 shows that the correlation coefficients were somewhat higher and statistically significant in the case of the relation between adjusted Full-Scale scores (Method A, Method B) and amount of supportive technique. As well, the correlations between Method A-adjusted Full-Scale scores and purity were statistically significant. Even so, the absolute magnitudes of these coefficients were not high. The relationships between the unadjusted Full-Scale score, amount, and purity were moderate to high and all were statistically significant. Thus, the operationalization of adherence as the adjusted Full-Scale score was again needed to achieve relative independence. The relationships between the unadjusted Full-Scale score and the adjusted Full-Scale scores (Method A, Method B) were not high, but were statistically significant. The correlation between amount and purity of supportive technique was low but statistically significant. In sum, these findings support the relative independence of adherence, amount, and purity as they were operationalized.

To summarize, the conceptualization of adherence in the current study differs from other related concepts that have been used to characterize treatment integrity, i.e., amount and purity. Amount is simply the quantity of technique and is operationally defined by the two subscale scores. Purity is defined as the proportion of technique, relative to other techniques. It is operationally defined as a proportion derived from the subscale scores. Adherence is conceptualized as the relative emphasis on interpretive versus supportive technique while avoiding over-emphasis. It is operationally defined as the adjusted Full-Scale scores (Method A or Method B).

Participant Ratings of the Therapeutic Alliance. Therapeutic alliance was defined as the nature of the working relationship between the patient and therapist. It was assessed by soliciting brief ratings by the patient and by the therapist after each session. The patient and therapist each rated six, seven-point Likert-type items that ranged from "very little" to "very much". The items focus on whether the patient: 1) had talked about private important material, 2) felt understood by the therapist, 3) understood and worked with what the therapist said, and 4) felt that the session enhanced understanding. The remaining two items focused on 5) whether the therapist was helpful and 6) whether the therapist and patient worked well together (Luborsky, 1984). The six items were averaged across their respective assessments. To investigate interdependency among the items, each set of six (patient-rated, therapist-rated) were subjected to a principal components analysis. The analysis of patient ratings resulted in a single factor accounting for 87% of the variance; each item loaded highly on the factor (mean loading = .93). Similarly, for therapist ratings only one factor emerged, accounting for 83% of the variance. Each item loaded highly on the factor (mean loading = .91). A test of the internal consistency of each set of items revealed a high coefficient alpha for patient ratings (.95) and a moderate coefficient alpha for therapist ratings (.56). Because the above analyses revealed high interdependency among each set of items, an overall alliance score was devised by calculating the average of the six items. Thus, two scores (patient, therapist) served as summary measures of the therapeutic alliance over the entire course of therapy. The correlation between the patient-rated alliance factor and the therapist-rated alliance factor was not high [$r(140) = .32, p < .001$].

The means and standard deviations of the patient-rated and therapist-rated alliance scores in the present project are reported in Table 8. The scores were similar, in magnitude and distribution, to those of a previous study by Piper et al. (1991), which found that the alliance (patient-rated, therapist-rated) was significantly associated with the patient characteristic quality of object relations and favourable therapy outcome. This supports the adequacy of the range of the alliance scores in the present project.

Measures of Therapy Outcome. The comprehensive battery of outcome measures employed in Piper et al.'s (1997) comparative investigation provided the post-therapy outcome data that was used in the present project. This battery included nine measures (questionnaire or interview) that covered 16 variables in the areas of interpersonal distress and functioning, psychiatric symptomatology, self-esteem, life satisfaction, and use of defences. Severity of disturbance associated with individualized target objectives was also assessed. The patient, therapist, and external assessors were all used as sources for outcome ratings.

Thirteen of the 16 variables were utilized in the STI-SUP study. These variables were measured at pre-therapy and post-therapy, permitting the calculation of residual gain scores. Three variables were excluded due to substantial missing data. Table 9 shows that the mean scores for the 13 outcome variables, pretherapy and posttherapy, were similar for STI and SUP treatment. As noted above, both STI and SUP therapy were found to be effective. Patients in interpretive treatment did not differ from patients in supportive treatment on overall improvement. Adequate range in the scores of the 13

outcome variables for both forms of treatment was evident from the findings of Piper et al. (1997), which showed that patient improvement varied as a function of two patient personality characteristics, quality of object relations and psychological mindedness.

A principal components analysis was conducted with the thirteen outcome variables; all were expressed as residual gain scores. The principal components analysis revealed three outcome factors that satisfied Kaiser's criterion (eigenvalues > 1.0). Collectively, these factors accounted for 60.4% of the variance. Factor I accounted for 42% of the variance and included the ratings of target objective severity provided by the patient and therapist, the Beck Depression Inventory (Beck & Steer, 1987), the global severity index of the SCL-90 (Derogatis, 1977), the Trait Anxiety Inventory (Spielberger, 1983), the Rosenberg Self-Esteem Scale (1979), a life satisfaction rating, the overall rating of the Inventory of Interpersonal Problems (Horwitz, Rosenberg, Baer, Ureno, & Villasenor, 1988), and ratings of maladaptive Defensive Style (Andrews, Singh, & Bond, 1993). All variables, except for life satisfaction, were scored in the pathological direction, that is, higher scores indicated greater pathology. The scores for life satisfaction were reversed in order to be consistent with the other variables. Although the content of the nine variables differed, the factor was interpreted as representing change in General Symptomatology and Dysfunction. Factor II accounted for 9.6% of the variance in the post-therapy outcome variables and included ratings of mature Defensive Style (Andrews, Singh, & Bond, 1993) and the Family subscale of the Social Adjustment Scale (SAS; Weissman, Paykel, Siegal, & Klerman, 1972). Scores for mature Defensive Style were reversed so that higher scores suggested less use of mature defences. Higher scores

on the Family subscale represented greater family pathology. It is difficult to conceptualize a single, common construct that encompasses both variables. As such, this factor is only understood as representing the constructs that each of the two variables suggest: Nonuse of Mature Defenses and Family Pathology. Factor III accounted for 8.7% of the variance and included ratings from the Social and Sexual subscales of the SAS. This factor is understood as representing Social-Sexual Maladjustment. The calculation of factor scores utilized the average of the residual gain scores for the variables which loaded highly on each factor. Thus for all three factors, higher scores represent greater pathology.

PROCEDURE

Raters. The Adherence Scale is intended for use by non-participant raters at the Bachelors degree level or higher. A total of ten raters were employed during the data collection phase of the project. A team of seven raters was available for the duration of the project; naturally occurring staff turnovers necessitated replacement by and training of new raters. Six of the raters were female and all raters were graduates of baccalaureate psychology programs hired as research assistants in the Research Unit of the Department's outpatient service. Seven of the raters had previous experience with rating samples of manual-guided psychotherapies. These seven raters were trained together as a group at the outset of Piper et al.'s 1997 investigation. The other three were trained individually when one of the original raters left and had to be replaced. W.E. Piper served as the trainer for the original group of seven raters. Before the rating process

began, raters were provided with a didactic overview of psychodynamic theory and the models of psychotherapy utilized in Piper and colleagues' comparative investigation (1997). The raters were then introduced to the Adherence Scale. Group discussions of the conceptual background of the Adherence Scale were held so that each rater could gain an adequate understanding of the material prior to applying the scale to actual rating material.

Ratings were made on audiorecordings of whole, 50-minute therapy sessions. Training for the rating procedure included listening to actual audiotaped examples of each feature of the Adherence Scale, and then discussing the rating of the material within the group. Audiotaped whole therapy sessions were then provided for practice by all raters. Each rater individually rated these sessions. All raters then met in a discussion group with the trainer to discuss any problems. Audiotaped sessions used for training were independent of those used in the research project. Rater reliability for the training phase was assessed with all raters independently rating one session from eight pilot cases. Reliability was determined using Shrout and Fleiss's (1979) Intraclass Correlation Coefficient (ICC) Model 2. The ICC (2,1) for the Full-Scale score was .93.

Rating Task. Studies 1 and 2 of the current project shared the same rating procedure. In each study, two independent raters provided ratings for one session from each of 50 cases. Both Study 1 and Study 2 involved patients treated with either supportive or interpretive individual psychodynamic psychotherapy. In each study, the treatments were equally represented (25 supportive cases, 25 interpretive cases). Cases were randomly chosen from a larger population (i.e., database as described above) with this constraint. In Study

1, both raters were male. One was the principal investigator of the current project, the other was randomly chosen from the pool of raters. In Study 2, two different raters were used; one rater was female. Both raters were chosen from the pool of raters based on availability.

In Study 3, all ten raters were used to assess therapist adherence for all 144 completer cases in the 1997 Piper et al. investigation. Each rater was randomly assigned to a case as the investigation progressed. The rating of the 144 cases took place over a period of about 3 years. The sessions of each therapy case were rated in a fixed order starting with the third session and proceeding with every second subsequent session (sessions 3, 5, 7, 9, 11, 13, 15, 17, 19). Whenever a tape was unavailable or inaudible, the audiotape from the previous or following session was used. A total of 1296 sessions were rated by the 10 raters; 648 interpretive therapy sessions and 648 supportive therapy sessions. Rater reliabilities were calculated on three occasions during the 3- year period. Table 10 shows that for each of the three calibration periods, rater reliabilities for the Full-Scale and two subscales were high. The average ICC (2,1) coefficients were: Full-Scale score = .93, supportive subscale = .87, interpretive subscale = .88. The rater reliabilities for the individual items of the Adherence Scale varied over the three periods, yet most remained in the moderate to high range. The mean ICC (2,1) coefficients were: .63 for the training phase, .68 for the middle phase of the study, and .63 for the late phase of the project.

The strength of a scale lies partly in its efficiency. This refers not only to the ease of using the scale, but also to the time required to apply the scale and how many raters are

needed to obtain reliable ratings. The Adherence Scale is a measure that requires approximately one hour for a 50-minute therapy session and can be used by trained Bachelor-level raters, thus requiring little clinical experience. As well, preliminary data suggested that reliable ratings could be obtained using only one rater. This supports the contention that the Adherence Scale is an efficient measure, thus contributing to the strength of the scale. These aspects of the Adherence Scale also argued for further research examining the concurrent and predictive validity of the scale.

RESULTS

STUDY 1 and STUDY 2

OVERVIEW OF APPROACH TO DATA ANALYSIS

Study 1 investigated the psychometric properties (rater reliability, internal consistency, factor structure) of the Adherence Scale. Study 2 was a cross-validation of the first study with an independent sample. Analyses in Studies 1 and 2 were each based on independent samples of 50 audiotaped sessions rated by two raters.

Rater reliability. Rater reliability was assessed for the Full-Scale, subscales, and individual items of the Adherence Scale. It was estimated using Shrout and Fleiss's (1979) intraclass correlation coefficient (ICC) model 2. This is a random effects model. It provides an estimate of the reliability of a mean rating that might be obtained with an independent sample of raters and represents the generalizability of the mean rating.

In Study 1, the ICC (2,1) coefficient for the Full-Scale was high (r = .95), as were the coefficients for the two subscales (r = .93, supportive subscale; r = .88, interpretive subscale). As shown in Table 11, the ICC (2,1) coefficients for the individual supportive and interpretive items were in the moderate to high range with the exception of one interpretive item, i.e., item 14 - impression of others. The average ICC (2,1) coefficient for all 14 items was .74.

In Study 2, the ICC (2,1) coefficient for the Full-Scale was similarly high (r = .95). The coefficient for the supportive subscale (r = .69) was moderate and the coefficient for the interpretive subscale (r = .84) was high. Table 11 shows that the

coefficients for the individual supportive items were in the moderate range with the exception of one item, i.e., item 13 - therapist disclosure. The coefficients for the individual interpretive items were in the moderate to high range. The average ICC (2,1) coefficient for all 14 items was .54.

In summary, rater reliability of the Full-Scale was equally high across both studies, but generally higher for the subscales and items in Study 1.

Internal consistency. Cronbach (1951) alphas were calculated to determine the internal consistency of the Full-Scale and subscales (interpretive, supportive). The ratings of each rater were examined separately (see Table 12). In Study 1, the alpha coefficients were: .92 and .95 for the Full-Scale; .86 and .88 for the interpretive subscale; and .92 and .94 for the supportive subscale. Similarly, for the second study the alpha coefficients for the Full-Scale were .92 and .86; for the interpretive subscale, .92 and .81; and for the supportive subscale, .81 and .87. Overall, the internal consistency of the Full-Scale and subscales of the Adherence Scale were found to be high.

Factor structure. To determine the underlying structure of the Adherence Scale, a principal components analysis of the 14 individual items was conducted. The analysis was performed on a data set that combined the ratings from each of the raters across both studies. Thus, a total of 200 individual ratings were used for the analysis. Combining the data from Study 1 and Study 2 was necessary in order to increase the sample to variable ratio. This follows the suggestion by Tinsley and Tinsley (1987) that a ratio of 5-10

subjects per variable is required to yield a stable factor solution. After combining data from Studies 1 and 2, a sample to item ratio of 14 to 1 was achieved.

Analysis of the 14 items resulted in three factors with eigenvalues of 1.0 or more. Collectively, they accounted for 66.3% of the total item variance. Based on a scree plot of the eigenvalues, the two largest factors were selected and rotated to the Varimax criterion to improve interpretability of the factor matrix. The principal factor loadings for the rotated factor matrix are shown in Table 13. It can be seen from this table that all of the supportive items have considerable loadings (.64 or greater) on the first factor, which accounted for 46% of the variance. None of the supportive items loaded highly on the second factor. It seems clear, therefore, that this first factor is a supportive factor, representing the technical features of SUP therapy.

The second factor, which accounted for 12% of the variance, had its highest loadings from the seven interpretive items. Each interpretive item loaded moderately to highly on only the second factor (.44 or greater). Again, the understanding of this factor seems clear; this is an interpretive factor, representing the technical features of STI therapy.

Summary of psychometric properties. The primary objective of Studies 1 and 2, reliably measuring variations in adherence to the STI and SUP treatment manuals, was achieved. High rater reliability for the Full-Scale and subscales was obtained using trained Bachelor-level raters. The ICC coefficients achieved for the Full-Scale and subscales are among the highest reported in the literature.

At the level of the individual items, reliability coefficients were in the moderate to high range across both studies except for two items: item 13 - therapist disclosure and item 14 - impression of others. An immediate consideration was whether to keep these items as part of the Adherence Scale or discard them. For several reasons, both items were retained as features of the Adherence Scale. First, each item had low reliability in only one of the two studies. Because the reliability for each item was not consistently low, it would have been premature to delete them from the scale. Second, although reliability for these items was low in one of the studies, the Full-Scale properties remained high. The adherence score, based on the Full-Scale score, was not significantly effected by the low reliability of one of its items. Third, the factor loading of item 13 - therapist disclosure was high and the factor loading of item 14 - impression of others was moderate on their respective factors, which suggested that each of the items adequately addressed their respective treatment constructs as intended. Finally, the retention of these two items enhanced the comprehensiveness of the content measured by the Adherence Scale.

Acceptable levels of internal consistency were found for the Full-Scale and subscales. The alpha coefficients for each were consistently high across Studies 1 and 2. This confirmed that the items of the Adherence Scale group together well, both as a whole and by treatment modality. The alpha coefficients obtained for the Full-Scale and subscales compare favourably with those of other adherence measures reported in the literature (e.g., Hill, O'Grady, & Elkin, 1992).

Principal components analysis demonstrated substantial independence of the supportive features from the interpretive features. Thus, the Adherence Scale taps therapist behaviours specific to both treatment models (SUP, STI). Principal components analysis yielded a meaningful factor structure underlying observed differences among SUP and STI therapy sessions. Supportive features and interpretive features emerged as interpretable dimensions of the scale. These factors highlight the scale's representation of both forms of dynamic treatment. Thus, there was correspondence between the factor structure and the rational subscales developed in advance.

Overall, the findings from Study 1 and Study 2 supported several aspects of reliability of the Adherence Scale and encouraged further research examining the predictive validity of the scale, i.e., hypotheses testing.

STUDY 3

OVERVIEW OF APPROACH TO DATA ANALYSIS

Study 3 used the Adherence Scale to test a number of hypotheses regarding the relationships among adherence, amount of technique, purity of technique, the therapeutic alliance, and treatment outcome. The analyses were conducted using data from 144 therapy completers.

The approach to the examination of the data was subdivided into six parts. The first three parts were planned analyses and the latter three parts were exploratory analyses. For each part, the analyses were initially conducted with each of the treatment subsamples (interpretive, supportive) and, then, across all cases. For the first part, the hypothesized

relationships between each of three constructs of treatment integrity, i.e., adherence, amount, and purity, and the therapeutic alliance were examined. Adherence was defined by two variables: the adjusted Full-Scale scores (Method A, Method B). The unadjusted Full-Scale score was also included in the analysis. All three Full-Scale scores (2 adjusted, 1 unadjusted) were included because this was the first attempt at exploring the operationalization of the adherence construct and there was no prior evidence that favoured one operational definition of adherence over another. Amount was defined by two variables: the interpretive subscale score and the supportive subscale score. Purity was also defined by two variables: the purity of interpretive technique and the purity of supportive technique. The therapeutic alliance was represented by two factors: the patient-rated alliance and the therapist-rated alliance. Pearson product-moment correlation coefficients were used to assess the relationships under investigation. Multiple regression analyses were also performed, using adherence, amount, and purity as predictor variables and each of the alliance factors as dependent variables.

The second part of the data analysis investigated the hypothesized relationships between adherence, amount, and purity, and treatment outcome. Outcome was composed of three factors: General Symptomatology and Dysfunction, Nonuse of Mature Defences and Family Pathology, and Social-Sexual Maladjustment. The relationships were analysed using Pearson correlation coefficients. As well, an investigation of the multivariate relationship of the three predictors (adherence, amount, purity) with each of the outcome factors was conducted.

The third part of the analysis assessed the correlational relationships between therapeutic alliance and treatment outcome.

The fourth part of the analysis was an exploratory examination of the effect of the interaction between each predictor variable and each alliance factor on treatment outcome. Since Study 3 examined the unique effect of each predictor and of the alliance on treatment outcome, a logical extension of the investigation was to examine the interactive effect of each predictor and alliance.

In the fifth part, an exploratory examination of the correlational relationships between each of the Adherence Scale items and the therapeutic alliance was undertaken. This analysis was initiated by an interest in exploring whether therapist behaviour at the more molecular level (i.e., specific therapist actions) would be related to the alliance.

The sixth and final part of the data analysis was also an exploratory inquiry of specific therapist behaviours. This analysis involved examining the correlational relationships between each of the Adherence Scale items and treatment outcome.

A comparison of supportive and interpretive treatments using the Adherence Scale and a brief description of the adherence scores within each of the treatment subsamples will be provided first. This will be followed by the planned quantitative analyses, a description of the Adherence Scale item ratings, and the exploratory data analyses.

COMPARISON OF SUPPORTIVE AND INTERPRETIVE TREATMENTS

One aspect of the validity of the Adherence Scale is its ability to differentiate sessions of supportive and interpretive treatment. Independent samples t-tests were used

to compare the means for the Full-Scale, subscales, and items of the Adherence Scale from each treatment subsample (72 supportive cases, 72 interpretive cases). As shown in Table 14, the Full-Scale and both subscales significantly distinguished between the two forms of treatment. Further, each of the 14 items of the scale were able to significantly differentiate the two treatments. These findings provide evidence that the Adherence Scale can distinguish the two forms of dynamic therapy as intended and provide support for the construct validity of the Adherence Scale.

DESCRIPTION OF ADHERENCE SCORE DISTRIBUTIONS

Interpretive therapy. Examination of adherence scores (i.e., adjusted Full-Scale scores) in interpretive treatment revealed that the majority of the scores fell within a narrow range. The average Method A-adjusted Full-Scale score was 35.02, with a standard deviation of 3.13. Eighty-five percent of Method A-adjusted Full-Scale scores were within a 10-point range (range = 29-39). The range of all 72 scores was 15 (range = 26-41). The average Method B-adjusted Full-Scale score was 35.61, with a standard deviation of 4.71. Seventy-one percent of Method B-adjusted Full-Scale scores fell within the same 10-point range (range = 29-39). The range of all 72 scores was 26 (range = 17-43). Thus, although there was variability in the adherence scores, most of the scores were within a limited range.

It was important to rule out that systematic differences among the adherence scores of each of the eight therapists existed. That would increase confidence that adherence, and not some confounding therapist characteristic, was responsible for the

results from the hypotheses testing. Differences in the adherence scores (i.e., adjusted Full-Scale scores) of the eight therapists were examined using a oneway ANOVA with the adjusted Full-Scale score as the dependent variable and therapist as the independent variable. The findings revealed a significant difference [F (7,64) = 3.19, $p < .01$] in Method A-adjusted Full-Scale scores and no significant difference [F (7,64) = 1.90, $p > .05$] in Method B-adjusted Full-Scale scores. It was found, using Duncan and Tukey-HSD post-hoc tests, that one therapist had consistently higher Method A-adjusted adherence scores (i.e., greater relative interpretive emphasis, corrected for over-emphasis) than most of the other therapists. In sum, the findings generally suggest that the variation in the adherence scores for interpretive therapy was not attributable to systematic differences among the eight therapists.

Supportive therapy. Within supportive treatment, a similar pattern in the variability of the adherence scores (i.e., adjusted Full-Scale scores) was evident. The average Method A-adjusted Full-Scale score was 16.94, with a standard deviation of 2.45. Ninety percent of Method A-adjusted Full-Scale scores fell within a 10-point range (range = 14-24). The entire range for all 72 scores was 12 (range = 12-24). The average Method B-adjusted Full-Scale score was 18.81, with a standard deviation of 5.35. Similarly, seventy-nine percent of Method B-adjusted Full-Scale scores were within a 10-point range (range = 14-24). The range for all 72 scores was 26 (range = 12-38). Similar to the adherence scores within interpretive therapy, there was variability across the adherence scores in supportive therapy but the majority were within a narrow range.

To test for systematic differences in adherence scores of the eight therapists, a oneway ANOVA was performed. Adjusted Full-Scale scores were the dependent variable and therapist was the independent variable. No significant differences were found for Method A-adjusted Full-Scale scores [$F(7,64) = 1.76$, $p > .05$] or for Method B-adjusted Full-Scale scores [$F(7,64) = 1.12$, $p > .05$]. These findings suggest that the variability in the adherence scores is not attributable to systematic differences among the eight therapists.

Combined sample. The method used to combine the Full-Scale scores (adjusted, unadjusted) from each subsample requires clarification. As described earlier, the Full-Scale score was keyed in the interpretive direction. Thus, an increase in the Full-Scale score represented an increased interpretive emphasis. Within interpretive therapy, an increase represented an increased emphasis on the prescribed treatment features and a decrease represented a decreased emphasis on the prescribed treatment features. In contrast, within supportive therapy, a decrease represented an increased emphasis on the prescribed treatment features. When the treatment subsamples were combined, the Full-Scale scores from the supportive sample were reversed (56 - Full-Scale score) so that an increase in the Full-Scale score represented an increased emphasis on the prescribed treatment features for both forms of therapy.

Examination of the adherence scores (i.e., adjusted Full-Scale scores) in the combined sample revealed a large difference in the variability of the scores for each adjustment method (Method A, Method B). The average Method A-adjusted Full-Scale score was 37.04, with a standard deviation of 3.46. The range of all 144 scores was 17

(26-43). The average Method B-adjusted Full-Scale score was 36.40, with a standard deviation of 5.08. The range for all 144 scores was 27 (17-44). Overall, there appeared to be adequate variability in the adherence scores of the combined sample.

A oneway ANOVA was used to test for systematic differences in the adherence scores of the eight therapists. No significant differences were found for Method A-adjusted Full-Scale scores [$F(7,136) = .17$, $p > .05$] or for Method B-adjusted Full-Scale scores [$F(7,136) = .29$, $p > .05$]. These results suggest that the variability in the adherence scores is not attributable to systematic differences among the eight therapists.

RELATIONSHIP BETWEEN PREDICTOR VARIABLES AND ALLIANCE

Adherence and Alliance

The hypotheses stated that adherence would have a direct positive relationship with alliance for each form of treatment

Interpretive therapy. Table 15 shows that there were no significant relationships between adherence (i.e., adjusted Full-Scale scores) and alliance (patient-rated, therapist-rated). The unadjusted Full-Scale score, however, was found to be significantly associated with therapist-rated alliance [$r(70) = .23$, $p < .05$]. Thus, the greater the emphasis on prescribed interpretive features relative to supportive features, the stronger the therapist rated the alliance.

Supportive therapy. Analyses of the data failed to show any significant relationships between adherence and alliance (patient-rated, therapist-rated), or between the unadjusted Full-Scale score and alliance (patient-rated, therapist-rated).

Across both therapies. No significant relationships between adherence and alliance (patient-rated, therapist-rated) were found. However, there was a significant relation between the unadjusted Full-Scale score and therapist-rated alliance [r (142) = .21, $p < .01$]. This suggests that when both forms of treatment are combined, the more the therapist emphasized features of the prescribed treatment relative to the non-prescribed features, the stronger the therapist rated the alliance.

Amount And Alliance

It was hypothesized that, within each form of therapy, amount of technique would have a curvilinear relation with alliance.

Interpretive therapy. First, linear relationships were examined. The findings revealed that amount of interpretive technique, i.e., the prescribed technique, was significantly associated with therapist-rated alliance [r (70) = .36, $p < .01$] . In order to evaluate the curvilinear relation between these variables, a hierarchical multiple regression analysis was performed. The interpretive subscale score was entered on the first step and the square of the interpretive subscale score was entered in the second step. The change in R^2 after entering the squared scores was not significant [F change (1, 69) = .000, $p = .983$]. Thus, the results suggest a linear association between amount of interpretive technique and therapist-rated alliance. The greater amount of emphasis on interpretive features, the stronger the therapist rated the alliance. No significant linear or curvilinear relationships were found for patient-rated alliance.

Supportive therapy. There were no significant relations, either linear or curvilinear, between amount of technique and patient-rated and therapist-rated alliance.

Across both therapies. Amount of supportive technique was significantly associated with therapist-rated alliance [$r\,(142) = .18, p < .05$] across all 144 cases. The curvilinear relation between these variables failed to reach statistical significance. Therefore, the linear association between amount of supportive technique and therapist-rated alliance suggests that when the therapist increasingly emphasized supportive interventions, he/she also rated the alliance as stronger.

Purity And Alliance

Purity was hypothesized to have a curvilinear relation with alliance within each form of therapy. No significant relationships, linear or curvilinear, were found in either treatment subsample or across all 144 cases.

Combined Effect of the Predictor Variables on the Alliance

Simultaneous regression analyses were used to examine the combined effect of adherence, amount, and purity on the therapeutic alliance. Six predictor variables (Method A-adjusted Full-Scale score, Method B-adjusted Full-Scale score, amount of interpretive technique, amount of supportive technique, purity of interpretive technique, purity of supportive technique) were involved in the analyses. Two alliance factors (patient-rated, therapist-rated) served as the dependent variables. For each analysis, only one of the two adjusted Full-Scale scores (Method A, Method B) and the variables

representing the amount and purity of one form of technique (interpretive, supportive) were included in the regression equation. This approach was taken to avoid problems of multicollinearity. The analyses were conducted for each treatment subsample but not for the combined sample because of the high correlations among each of the predictors. A total of sixteen regression analyses were conducted. Of these, two yielded significant results. Both involved therapist-rated alliance in interpretive therapy. Further examination of the findings did not yield any new information beyond that provided by the univariate analyses.

RELATIONSHIP BETWEEN PREDICTOR VARIABLES AND OUTCOME

Adherence And Outcome

The hypotheses predicted that adherence would have a direct relation with treatment outcome within each form of therapy. As shown in Table 16, analyses of the data failed to show any significant associations between either of the adjusted Full-Scale scores or unadjusted Full-Scale score and the outcome factors.

Amount And Outcome

It was hypothesized, for each form of treatment, that amount would have a curvilinear relation with outcome. Analyses of the data did not reveal any significant linear or curvilinear relationships between amount and outcome. Table 16 shows that this was the case for each treatment subsample and for the combined sample.

Purity And Outcome

The hypotheses predicted that purity would have a curvilinear relation with outcome in each form of treatment. There were no significant relationships, linear or curvilinear, found within either treatment subsample or across both therapies (see Table 16).

Combined Effect of the Predictor Variables on Outcome

Simultaneous regression analyses similar to that used for the alliance factors were conducted for each of the three outcome factors (General Symptomatology and Dysfunction, Nonuse of Mature Defences and Family Pathology, Social-Sexual Maladjustment). The analyses were conducted for each treatment subsample. A total of twenty-four regression analyses were conducted. No significant results were found.

ALLIANCE AND OUTCOME

The therapeutic alliance was expected to have a positive relationship with treatment outcome. The relationship between each of the two alliance factors and each of the three outcome factors was examined by a Pearson correlation.

Interpretive therapy. As shown in Table 17, patient-rated alliance was found to be significantly associated with improvement on outcome factor II: Nonuse of Mature Defences and Family Pathology [r (66) = -.24, $p < .05$]. The stronger the patient-rated alliance, the greater the improvement on mature defences and family dysfunction. Therapist-rated alliance was not found to be significantly related to outcome.

Supportive therapy. A significant association between patient-rated alliance and improvement on outcome factor I: General Symptomatology and Dysfunction [r (68) = -.37, $p < .01$] was found. The stronger the patient-rated alliance, the greater the symptomatic improvement. Therapist-rated alliance was not significantly related to outcome.

Across both therapies. As shown in Table 17, patient-rated alliance was significantly related to improvement on outcome factor I: General Symptomatology and Dysfunction [r (136) = -.27, $p < .001$] and outcome factor II: Nonuse of Mature Defences and Family Pathology [r (136) = -.21, $p < .05$]. Thus, the stronger the patient rated the alliance, the greater the improvement on symptomatology and the use of mature defences and family pathology.

A significant relation between therapist-rated alliance and outcome factor I: General Symptomatology and Dysfunction [r (138) = -.17, $p < .05$] was also found. The stronger the alliance from the therapist's perspective, the greater the symptomatic improvement.

EFFECT OF THE INTERACTION BETWEEN EACH PREDICTOR VARIABLE AND ALLIANCE FACTOR ON TREATMENT OUTCOME

Hierarchical regression analyses were used to investigate the interaction between each of the seven predictor variables (Method A-adjusted Full-Scale score, Method B-adjusted Full-Scale score, unadjusted Full-Scale score, amount of interpretive technique, amount of supportive technique, purity of interpretive technique, purity of supportive

technique) and each of the two alliance factors (patient-rated, therapist-rated) on each of the three outcome factors. In the first step of each analysis, the predictor variable was entered. In the second step, one of the alliance factors was included in the equation. In the final step, the multiplicative product of the variable and factor was entered. The analyses were conducted for each treatment subsample, as well as for the combined sample. For each sample, 42 regression analyses were conducted (7 predictors x 2 alliance factors x 3 outcome factors). Out of the total of 126 regression analyses, only six interaction effects were significant ($p < .05$). Given the probability of Type I error, these findings will not be further discussed.

DESCRIPTION OF ADHERENCE SCALE ITEM RATINGS

Interpretive therapy. Each item received a therapist-emphasis rating that ranged from 0 to 4 (0 = No Emphasis, 1 = Minor Emphasis, 2 = Moderate Emphasis, 3 = Considerable Emphasis, 4 = Major Emphasis). Examination of the ratings of individual items in interpretive sessions revealed that although certain features received high emphasis ratings, others received very low ratings (see Table 18). The three items (items 4, 6, 12) that received the highest ratings (means of 2.32, 3.31, and 2.08, respectively) were interpretive features. These items dealt with encouraging the patient to explore uncomfortable emotions, providing interpretations, and focusing on the patient and therapist in the treatment situation.

The items (items 7, 11) that received very low ratings (means of .08 and .07, respectively) were supportive features. These items focused on engaging in problem-solving strategies with the patient and praising the patient.

Supportive therapy. Similarly, there was considerable variability in the emphasis ratings for supportive therapy; some features received high emphasis ratings, while others received very low ratings (see Table 19). The three items (items 1, 3, 5) that received the highest ratings (means of 2.91, 3.73, and 2.38, respectively) were supportive features. These items addressed gratifying the patient, making non-interpretive interventions, and providing guidance to the patient. The two items (items 8, 10) that received very low ratings (means = .03 and .02, respectively) were interpretive features. These focused on directing attention to the patient's subjective impression of the therapist and making links between the patient's relationship with the therapist and the patient's relationships with others outside of therapy.

RELATIONSHIP BETWEEN ADHERENCE SCALE ITEMS AND ALLIANCE

Pearson correlations were used to investigate the relationships between each of the 14 Adherence Scale items and each of the two alliance factors. No a priori hypotheses regarding the relation between the features of dynamic psychotherapy, represented by each of the Adherence Scale items, and alliance had been formulated. With 14 predictors (i.e., Adherence Scale items), the probability of making a Type I error was considerably greater than .05. However, considering the exploratory nature of this part of the analysis, it seemed reasonable to run the risk of increasing Type I error in favour of minimizing

Type II error, thereby increasing statistical power. In order to strike an appropriate balance between Type I error protection and investigative interest, an alpha level of .01 was used for each statistical test.

Interpretive therapy. Table 20 shows that two of the seven interpretive items were found to be significantly associated with the therapist-rated alliance. These were: item 8 - impression of therapist [r (70) = .32, $p < .01$] and item 10 - linking [r (70) = .33, $p < .01$]. It appears that when the therapist placed greater emphasis on attending to the patient's subjective impression of the therapist and linking the patient-therapist relationship to other relationships of the patient, the therapist rated the alliance as stronger. None of the interpretive items were found to be significantly related to patient-rated alliance. Moreover, none of the supportive items were found to be significantly associated with patient-rated or therapist-rated alliance in interpretive therapy.

Supportive therapy. There were no significant ($p < .01$) relationships found between the Adherence Scale items and patient-rated or therapist-rated alliance (see Table 21).

Across both therapies. None of the Adherence Scale items were found to be significantly ($p < .01$) associated with patient-rated or therapist-rated alliance (see Table 22).

RELATIONSHIP BETWEEN ADHERENCE SCALE ITEMS AND OUTCOME

Pearson correlations were used to investigate the relationships between each of the 14 Adherence Scale items and each of the outcome factors. There were no a priori

hypotheses offered regarding the relation between the features of dynamic psychotherapy, represented by the 14 items of the Adherence Scale, and treatment outcome. Again, an alpha level of .01 was used in order to balance Type I and Type II error.

Interpretive therapy. As shown in Table 23, no significant ($p < .01$) relationships were found between the Adherence Scale items and treatment outcome.

Supportive therapy. Within supportive treatment, one interpretive item was significantly associated with outcome (see Table 24). Item 8 - impression of therapist was inversely related to improvement on outcome factor I: General Symptomatology and Dysfunction [$r\ (69) = .38, p < .001$] and to improvement on outcome factor III: Social-Sexual Maladjustment [$r\ (68) = .32, p < .01$]. The greater the therapist's emphasis on the patient's subjective impression of the therapist, the less the improvement in symptomatology and social-sexual functioning.

Across both therapies. Analysis of the data failed to show any significant ($p < .01$) associations between the Adherence Scale items and treatment outcome when both forms of treatment were combined (see Table 25).

SUMMARY

Adherence, represented by the adjusted Full-Scale scores, was found not to be significantly associated with the therapeutic alliance (patient-rated, therapist-rated) or treatment outcome. The unadjusted Full-Scale score, however, was found to be significantly associated with therapist-rated alliance in the interpretive treatment subsample and across all 144 cases.

Amount of interpretive technique was found to be significantly related to therapist-rated alliance in the interpretive treatment subsample. Amount of supportive technique was significantly related to therapist-rated alliance across all cases. There were no significant correlations for patient-rated alliance. Neither amount of interpretive technique nor amount of supportive technique was found to be significantly associated with treatment outcome.

There were no significant relationships between purity of therapy (interpretive or supportive) and the alliance (patient-rated, therapist-rated) or treatment outcome.

Patient-rated alliance was significantly associated with outcome factor I: General Symptomatology and Dysfunction in SUP therapy and across all cases. Patient-rated alliance was also significantly associated with outcome factor II: Nonuse of Mature Defences and Family Pathology in STI therapy and across all cases. Therapist-rated alliance was significantly related to outcome factor I: General Symptomatology and Dysfunction across all 144 cases.

Of the 14 Adherence Scale items, only item 8 - impression of therapist and item 10 - linking were significantly related to therapist-rated alliance. This was within the interpretive treatment subsample only. There were no significant relationships with patient-rated alliance.

Item 8 - impression of therapist was significantly and inversely associated with treatment outcome. This was with outcome factor I: General Symptomatology and Dysfunction and outcome factor II: Nonuse of Mature Defences and Family Pathology within the supportive treatment subsample only.

DISCUSSION

ORIENTATION OF PRESENT STUDY TO CURRENT PSYCHOTHERAPY RESEARCH

During the past decade, treatment verification has evolved into an expected methodological requirement in the field of psychotherapy research. Proponents of this requirement (Luborsky & Barber, 1993; Moncher & Prinz, 1991; Waltz et al., 1993) have recommended that investigators empirically verify the treatments that are provided in their studies. In addition to having therapists use treatment manuals, researchers need to document the extent to which therapists follow manuals. Waltz et al. (1993) argue that a basic tenet of clinical research methodology is that the strength of the treatment manipulation is crucial to the design of interpretable studies. Treatment integrity, or adherence, is central to the interpretation of results from research on psychotherapy. The task is to develop reliable adherence measures that can be used to empirically verify the treatments that are provided in psychotherapy studies. An important related question that has been generated by work in this area concerns the effect of differential levels of therapist adherence on the process and outcome of therapy. In other words, how are the therapeutic alliance and treatment outcome effected by different degrees of therapist adherence to the therapy manual?

Many measures for conducting treatment checks have been developed, but no widely accepted methodology exists. A consequence of the lack of guidelines for documenting therapist adherence is the development of measures that may be assessing different constructs. For example, a common practice in the development of adherence

scales has been to use measures of technique frequency as measures of adherence. Although equation of the two may be accurate in some circumstances, it must be questioned in others. Treatment manuals generally do not instruct therapists to provide prescribed techniques as frequently as possible. Thus, measures of the two constructs (frequency, adherence) usually need to be differentiated.

A major consequence of this lack of differentiation is the inability to compare the results of studies that use different measures of adherence. Because of this, it is difficult to discern trends in the results of the few studies that have addressed the question of whether adherence makes a difference in the process and outcome of psychotherapy.

The present investigation fulfilled several objectives regarding the topic of treatment verification.

a) A brief adherence measure focusing on technical features presented in the manual for two forms of time-limited, short-term, individual dynamic psychotherapy was developed.

b) The psychometric properties (rater reliability, internal consistency, factor structure) of the Adherence Scale were determined using two independent samples.

c) The predictive validity of the adherence measure was examined by testing a number of hypotheses involving the therapeutic alliance and treatment outcome.

The present project differed from other investigations of adherence by distinguishing among three components of treatment integrity: adherence, amount, and

purity. These constructs were intended to capture the differences between a) conducting therapy according to the guidelines of a manual (adherence), b) providing interventions at variable frequencies (amount), and c) providing a therapy with differing levels of contaminants, i.e., non-prescribed interventions (purity).

The present investigation had four important methodological characteristics that previous studies often lacked. First, the data were based on ratings of a large number of audio-taped therapy sessions. Second, the psychometric properties of the Adherence Scale were determined with two independent samples. Third, separate samples were used for scale development and hypothesis testing. Fourth, adherence, amount, and purity were measured independently and involved in hypothesis testing to determine their differential effects.

Discussion of the findings of the present project will focus on the results of each of the three studies in turn (scale development, hypothesis testing). Suggestions for future data analyses and investigations will be addressed throughout. The general limitations of the investigation will then be reviewed, concluding with a discussion of the implications of the present findings.

DETERMINING THE PSYCHOMETRIC PROPERTIES OF THE ADHERENCE SCALE

A brief adherence measure which focused on 14 technical features of two forms of manual-guided dynamic psychotherapy (STI, SUP) was developed. Seven of the items represented interpretive features. The other seven items represented supportive features.

Two subscale scores (interpretive, supportive) and one Full-Scale score were derived from the Adherence Scale. The psychometric properties (rater reliability, internal consistency, factor structure) of the newly-developed Adherence Scale were determined in Study 1 and Study 2 of the present project. The results showed that rater reliability for the Full-Scale and subscales were high. At the level of the individual items, reliability coefficients were in the moderate to high range. The findings thus suggest that the Adherence Scale can be used reliably by different raters.

The internal consistency of the Full-Scale and subscales were acceptable. The alpha coefficients for each were high across both studies. This confirms that the items of the scale group together well, both as a whole and by treatment modality.

The factor structure of the Adherence Scale confirmed the rational structure of the scale developed in advance. Principal components analysis revealed that interpretive features and supportive features loaded on independent factors, which in turn corresponded to the interpretive and supportive subscales.

In terms of construct validity, comparative analyses provided evidence that the Full-Scale, subscales, and items of the Adherence Scale differentiated between supportive and interpretive sessions.

Overall, the findings provided evidence that the Adherence Scale addresses the technical features of the two forms of therapy (STI, SUP) as intended and is a reliable measure of therapist adherence.

PREDICTING THE THERAPEUTIC ALLIANCE

Therapist Adherence and the Alliance. Therapist adherence, as defined by the adjusted Full-Scale scores, was found not to be related to the therapeutic alliance for either treatment (interpretive, supportive). Thus, neither the patient's nor the therapist's perception of the alliance differed with varying levels of therapist adherence to the treatment manuals.

One possible explanation is that the therapist's adherence to a technical manual is not essential for the development and maintenance of a strong working relationship with the patient. This conclusion must be tempered, however, in light of several alternative explanations. For example, a number of unmeasured variables may have influenced the effect of adherence (e.g., therapist attitude, therapist competence). Research has shown (Lambert & Bergin, 1994) that therapist characteristics such as warmth and positive attitude are significantly associated with a strong therapeutic alliance. It is possible these unmeasured therapist variables may have confounded the effect of adherence in the present project. That is, perhaps the warm, caring manner of the therapist and his or her ability to relate to the patient had a powerful enough effect on the working relationship to overshadow the effect of adherence. This is not to say that adherence is irrelevant but its power to facilitate a strong alliance is limited when compared with personal influence. If the facilitative behaviours of the therapist (i.e., warmth, positive attitude) are measured in future studies, they could then be partialled out of analyses addressing the relation between adherence and alliance.

A similar explanation is that the competence of the therapist pre-empted the independent effect of adherence. Competence is defined as the skillful provision of technique. It is possible that highly skilled therapists may be capable of adapting prescribed techniques to the dictates of the treatment situation. That is, therapists who have a high level of competence are able to provide therapy in an effective manner regardless of the degree to which the treatment features employed conform to a treatment manual. Barber, Crits-Christoph, and Luborsky (1996) found that competent delivery of expressive (interpretive) technique significantly predicted subsequent patient improvement. Although adherence and competence scores were moderately ($r = .55$) correlated, the relationship between competence and outcome remained significant after controlling for adherence. Thus, in the present project, it is possible that the skill with which the therapist provided therapy may have been confounded with the effect of adherence. In order to separate the effect of adherence from competence, future research would need to utilize a reliable measure of each and include the variables in analyses that would hold constant the effects of one variable while assessing the predictive power of the other.

Another alternate explanation for the lack of significant findings may be that the variability in the adherence scores was too small to allow for a sufficient test of the hypothesis. As described earlier, the majority of adherence scores were restricted to a relatively narrow range. A constricted distribution usually does not allow for an adequate test of an hypothesis. In addition, the range indicated that the therapists almost always adhered to the designated technique, i.e., a moderate or greater level of adherence almost

always occurred. To detect an effect of adherence on the alliance, a greater range of adherence scores may be required, in particular a range that included low adherence scores. Future studies may have to ensure such a range to detect an effect. Varying the therapist sample could insure a greater range of adherence scores, e.g., using therapists of varying experience (trainees through seasoned professional) may provide greater variability in adherence scores.

It is possible that other, presently unknown, adjustments to the Full-Scale scores to define adherence are required to detect a significant effect. The adjustments used in the present project (Method A, Method B) involved specific criteria for extreme scores and penalties. Although derived on logical grounds, they did not exhaust all possible alternatives.

Another possibility may be that once a certain level of adherence is achieved, further emphasis on the prescribed interventions may not have a noticeable effect. Perhaps there is a level of adherence that the therapist must achieve to facilitate a strong alliance. Once this level is reached, any further emphasis on the prescribed treatment features may have a negligible effect.

The Unadjusted Full-Scale Score and the Alliance. While the adjusted Full-Scale scores (i.e., adherence) were not significantly associated with the alliance, the unadjusted Full-Scale score was. Specifically, it was found to be directly related to therapist-rated alliance within the interpretive form of treatment and across all cases. The relationship between these variables in the supportive form of treatment, although statistically

nonsignificant, was consistent with those found in the interpretive form of treatment. That is, there was a trend between greater relative emphasis on supportive features and more positive ratings of the alliance by the therapist. It is possible that the greater the emphasis provided on the prescribed treatment features relative to the emphasis on the features of the other form of therapy, the stronger the therapist perceived the alliance.

Alternatively, it is also possible that the stronger the therapist perceived the alliance, the more he or she provided a higher relative emphasis on the prescribed treatment features. The therapists may have felt that once a strong working relationship with the patient was established, he or she could then devote more effort to emphasizing the prescribed treatment interventions. Perhaps the therapists believed that a solid collaborative partnership enabled the patient to more effectively utilize the prescribed treatment interventions.

Amount of Technique and Alliance

Interpretive technique. Amount of interpretive technique, represented by the interpretive subscale score, was found to be significantly associated with therapist-rated alliance within interpretive treatment. Thus, the greater the emphasis on interpretive features within interpretive therapy, the stronger the therapist perceived the alliance.

Considering the high correlation between the unadjusted Full-Scale score and amount of interpretive technique, the explanations offered above may also be applicable to the relationship between amount and alliance. One possible explanation is that when the therapists provided greater amounts of emphasis on interpretive features, e.g.,

providing thoughtful interpretations, exploring uncomfortable feelings, they may have assumed that the working relationship grew stronger. A reverse causal explanation for the relationship between amount of interpretive technique and therapist-rated alliance is that a stronger alliance allowed the therapists to be more interpretive. When the therapist recognized that the alliance was strong, he or she may have felt that the patient could tolerate a more intense interpretive focus in therapy. Thus, the therapist may have perceived a strong alliance as a necessary buffer for the anxiety that is provoked by an intense interpretive emphasis in therapy.

Supportive technique. Amount of supportive technique, defined by the supportive subscale score, was significantly associated with therapist-rated alliance across all cases. The more emphasis on supportive features, the stronger the therapist perceived the alliance. The therapy manual for both forms of treatment indicated that the therapist should establish a strong alliance. When therapists provided emphasis on supportive features, within each form of treatment, they probably anticipated that this would help secure a strong working relationship with the patient. As a result, the therapists may have perceived a strong alliance based upon their expectation.

An alternate explanation is that when the therapist recognized that a strong alliance with the patient was evident, he or she then provided emphasis on supportive features, perhaps praise and gratification in particular, as a way of reinforcing the patient's positive involvement in therapy. In future studies, one method that may help clarify the causal direction of this relationship would be to ask the therapist, after each therapy session, about his or her intentions for the treatment strategies used.

Purity and Alliance. Purity was not found to be related to the therapeutic alliance. Thus, neither the patient's nor the therapist's perception of the alliance was significantly affected by the purity of therapy. It is possible that the variability in the purity scores was too small to allow for a sufficient test of the hypothesis. Alternatively, purity of technique may not be important for the development of a strong alliance.

PREDICTING TREATMENT OUTCOME

Adherence and Outcome. Therapist adherence was found not to be related to treatment outcome. It is possible that the technical, manual-guided behaviour of the therapist has little importance for patient change. However, similar to the alliance findings, several alternative explanations should be considered. One possibility is that therapist competence was confounded with the effect of adherence. Therapist competence has been found to be positively associated with favourable patient outcome over and above the effect of adherence (Barber, Crits-Christoph, & Luborsky, 1996). Thus, it is possible that the unique effect of adherence was superseded when therapists provided treatment in a skillful manner.

An alternative explanation for the lack of significant findings between adherence and outcome is that the variability in the adherence scores was too small to allow for a fair test of the hypothesis. As well, the therapists almost always adhered to the prescribed treatment. In other words, since the therapists rarely failed to adhere to the designated therapy, it is difficult to determine the effect of low adherence.

Yet another possibility is that once the therapists reached a certain level of adherence, which may have facilitated patient improvement, further emphasis on the prescribed treatment features may have had little effect.

An equally tenable possibility is that adjustments to the Full-Scale score to define adherence, other than the ones used in the present project, may be required to detect a significant effect.

Amount and Outcome. Neither amount of interpretive technique nor amount of supportive technique, represented by the two subscale scores, was found to be significantly associated with treatment outcome. This was the case for each treatment subsample and across all cases. As such, the patients' improvement in therapy was not significantly affected by varying amounts of emphasis on interpretive or supportive treatment technique. These findings are consistent with those of other investigations (e.g., Barber, Crits-Christoph, & Luborsky, 1996) that have failed to find a significant relationship between frequency of technique and treatment outcome. It is possible that a greater range may have provided a greater opportunity to detect a significant relationship.

Purity and Outcome. Purity of therapy was found not to be related to treatment outcome. These findings are in contrast to those of Luborsky et al. (1985) who found that purity of supportive-expressive therapy and of cognitive-behavioural therapy were related to significant patient improvement. One noticeable difference between Luborsky et al.'s study and the current project was the variability in purity scores. In the former, the

average purity scores ranged from .68 to 1.00 across six therapists in the two psychotherapy groups. In the latter, the average purity scores ranged from .75 to .92 across eight therapists in the two therapy groups. Perhaps the limited range of purity scores in the current project diminished the likelihood of finding significant results. However, the range of purity scores from Luborsky et al.'s cognitive-behavioural therapy group was comparable to the range of purity scores in the present project and the purity-outcome relationship for that treatment was significant.

Thus, some other reason may be responsible for the difference in the findings of the present project and Luborsky and colleagues' study. Perhaps purity was confounded with therapist competence in Luborsky et al.'s study. In their investigation, patients of one therapist had significantly better improvement than patients of the other therapists. This therapist also has significantly higher purity scores than the other therapists. Luborsky et al. report that therapist skill was measured but was not significantly associated with treatment outcome. However, the validity of the measure used to assess therapist skill seems questionable. Thus, there remains the possibility that it was the competence of the therapist which facilitated favourable patient change.

Similarly in the present project, therapist competence may have tempered any effect of purity. That is, the skill with which the therapist provided treatment techniques may have been powerful enough to overshadow the effect of adherence.

Yet another difference between the present project and Luborsky et al.'s study is the form of treatment involved. The most noticeable difference is between the two forms of dynamic treatment in the present project and cognitive-behavioural therapy in the

Luborsky et al. study. Perhaps purity is an effective predictor of outcome for only certain forms of psychotherapy.

Therapeutic Alliance and Treatment Outcome

Patient-rated alliance. The patient's perception of the therapeutic alliance was significantly associated with outcome factor I: General Symptomatology and Dysfunction in SUP therapy and across all cases, and with outcome factor II: Nonuse of Mature Defences and Family Pathology in STI therapy and across all cases. In other words, the patient's perception that a collaborative, helping relationship was evident with the therapist made it more likely that the patient would experience fewer distressing symptoms, make greater use of mature defences, and experience less family dysfunction. One possible explanation is that the alliance was therapeutic in its own right. The patient's and therapist's commitment to a common goal provides for a cooperative working relationship in which the patient's increased sense of trust, safety, and security may lead to decreases in depression, hostility, and anxiety, as well as positive changes in the use of defences and family functioning. In therapy, the patient experiences a relationship that is characterized by understanding, acceptance, and encouragement. Such a partnership may be unlike any other that the patient has outside of therapy. In this sense, the alliance may function as a corrective emotional experience for the patient.

A second possibility is that the therapeutic alliance provided a context in which the treatment techniques operated to bring about change. That is, a strong alliance was a prerequisite for interventions to work effectively. When a strong, collaborative

relationship exists between the patient and therapist, the patient may be better able to utilize the therapeutic strategies provided by the therapist. The patient recognizes that the therapist is committed to helping him or her, therefore, the patient puts his or her faith in what the therapist offers and makes an effort to utilize the interventions. Without a strong alliance, the patient does not feel accepted by the therapist, is defensive, and thus does not cooperate with the therapist. To test this possibility, future research could examine whether the interaction between the alliance and treatment technique significantly predicts treatment outcome.

Yet a third possibility may be that the patient's ratings of the alliance were responsive to positive change. In other words, the patient's rating of the alliance became stronger when the patient recognized that his or her difficulties were improving.

Therapist-rated alliance. Therapist-rated alliance was significantly associated with outcome factor I: General Symptomatology and Dysfunction when both treatment subsamples were combined. In other words, when the therapist perceived that a strong, working relationship had been evident with the patient, it was more likely that the patient experienced fewer distressing symptoms. Therapist-rated alliance addresses the same construct as does patient-rated alliance, i.e., the therapeutic alliance. Thus, explanations similar to those offered above can be applied to the relationship between therapist-rated alliance and outcome. One possibility is that the sense of collaboration and participation of a strong alliance may provide a therapeutic effect in its own right. Alternatively, a strong alliance may provide a context in which treatment interventions function effectively to facilitate patient improvement. Another possibility is that the therapist's

alliance ratings reflected the patient's improvement. That is, the therapist monitored the patient's change over the course of the therapy and as the patient improved, the therapist rated the alliance stronger. In this regard, therapist alliance ratings may have represented an early assessment of outcome.

RELATIONSHIP BETWEEN TREATMENT FEATURES AND ALLIANCE

Two of the 14 treatment features represented by the Adherence Scale items were significantly related to the therapeutic alliance (therapist-rated). Both were interpretive features. Therapist emphasis on the patient's subjective impression of the therapist (item 8) and linking the patient-therapist relationship to other relationships of the patient outside of therapy (item 10) was directly associated with the therapist's perception of a strong working relationship with the patient within the interpretive treatment subsample. In other words, when the therapist attended to the patient's subjective impression of the therapist and made links between the patient-therapist relationship and the patient's relationships outside of therapy, the therapist was more likely to rate the alliance as strong.

Item 8 - impression of therapist and item 10 - linking represent key interpretive features. These features focus on the transference and transference linking, respectively, which are viewed as central axes for interpretive work. Greenson (1967) defined transference as:

> "the experiencing of feelings, drives, attitudes, fantasies and defences toward a person in the present, which do not befit that person but are a repetition of

> reactions originating in regard to significant persons of early childhood, unconsciously displaced onto figures in the present. The two outstanding characteristics of a transference reaction are: it is a repetition and it is inappropriate" (p.155).

Transference linking occurs when the therapist associates current transference enactments in therapy to parallel experiences in childhood or in current relationships outside of therapy. Well known proponents of interpretive therapy (e.g., Malan, 1976) suggest that the immediacy and intensity of transference make it uniquely advantageous as a vehicle for exploring and understanding the patient's unconscious conflicts and difficulties.

Perhaps the therapists believed that certain conditions must be present before emphasis on transference and transference linking can occur. Thus, when the therapists provided greater emphasis on these features, they assumed that the alliance must be strong. Similarly, transference interpretations can help the patient understand how patterns of distortions of current realities underlie much of the interpersonal strife he or she experiences and enable the patient to perceive people more realistically. This could subsequently strengthen the working relationship between the patient and therapist.

An equally tenable explanation is that the therapist emphasized these key interpretive features only after he or she perceived the alliance with the patient to be strong. The interpretive approach in general, and the focus on the transference in particular, tends to heighten the patient's anxiety. The therapists knew that the patient must feel safe and accepted in therapy in order to tolerate the intensity of examining transference and linking it to other relationships. Thus, it is likely that the therapist

waited for a strong alliance to be developed and maintained before he or she increased emphasis on these important interpretive features.

In order to learn more about the causal direction of these relationships, researchers may want to ask the therapist about his or her intentions for emphasizing certain treatment techniques provided during a therapy session and what prompted his or her decision to utilize them. A more quantitative method, sequential analysis, may be employed to corroborate this effort. Sequential analysis allows researchers to establish the temporal contiguity of an effect in the psychotherapy process. That is, it allows a researcher to determine which therapist interventions lead to which patient responses, or vice versa.

No interpretive treatment features were significantly associated with patient-rated alliance. As well, no supportive treatment features were found to be significantly related to either the therapist-rated alliance or the patient-rated alliance within either treatment subsample or across all cases.

RELATIONSHIP BETWEEN TREATMENT FEATURES AND OUTCOME

Only item 8 - impression of therapist of the 14 Adherence Scale items was significantly associated with treatment outcome. This was with outcome factor I: General Symptomatology and Dysfunction and outcome factor III: Social-Sexual functioning, within the supportive treatment subsample. The greater the therapist's emphasis on the patient's subjective impression of the therapist, the less patient improvement in symptomatology and social-sexual functioning. As described above, item 8 represents an

interpretive treatment feature that focuses on transference. It is likely that when the therapist emphasized this treatment feature, conflictual issues were identified and patient anxiety heightened. Examination of these issues is not part of the supportive treatment protocol. It would have been out of context and perhaps perceived as critical by the patient. It is likely that unconscious conflict was identified but not thoroughly explored. As a result, the patient may have become more anxious and frustrated because a problem was brought to his or her attention but not examined so that he or she could more fully understand it. This could precipitate a worsening of problematic symptoms. Also, because the conflictual issues were interpersonal (between patient and therapist) it is possible that other interpersonal relationships of the patient suffered as a result of the patient's negative reaction.

A reverse causal explanation is that the therapist increased his or her emphasis on this treatment feature when he or she viewed the patient's difficulties as worsening. In an attempt to interpret the patient's decline, the therapist may have focused on issues which he or she believed were at the root of the problem. Thus, the therapist may have tried to interpret transference as a means of helping the patient with his or her difficulties. Even within supportive treatment, the therapists may have resorted to an interpretive treatment feature in an attempt to help the patient.

LIMITATIONS OF THE PRESENT PROJECT

Interpretations of the findings of the present project must be qualified in the face of conceptual and methodological limitations. The definition of what constituted

therapist adherence in the present project represented the balance of two forms of dynamic treatment (STI, SUP). In general, the manual for both forms of treatment instructed therapists to provide a relative emphasis on the prescribed treatment techniques, yet refrain from over-emphasis. However, the manuals did not define quantitatively what constituted over-emphasis. Consistent with treatment manuals for other forms of dynamic psychotherapy, the manuals for STI therapy and SUP therapy did not prescribe specific amounts of technique to be provided.

Authors of dynamically-oriented psychotherapy manuals share a common commitment to avoid over-regimentation of therapists. That is, they intentionally refrain from writing step-by-step instructions for therapists to follow over the course of a session and over the treatment period. In part, this is done to allow the therapist flexibility in his or her technical approach to the patient's problems. Also, in dynamic therapies the patient is expected to determine the direction that therapy takes. It would be counter-intuitive to highly regulate the session by means of the therapist's interventions. Nevertheless, when instructions such as "avoid over-emphasis" are given to therapists, a more specific guideline may be needed to define over-emphasis. Global ranges for treatment features that are associated with favourable outcome need to be identified and communicated to the therapist. The present project took a step in that direction by examining the relationships among technical features, alliance, and outcome.

The above definitions (conceptual and operational) of adherence were unique to the present project. Inconsistent definitions and overlap with other constructs have plagued this area of research. Offering yet another definition runs the risk of contributing

to the problem. On the one hand, clear and independent definitions of adherence, amount, and purity is a desirable objective. On the other hand, new definitions are not directly comparable to those of other studies that have investigated the predictive validity of adherence.

A similar difficulty involves the definition of amount in the current project. Amount represented not only the perceived frequency in which treatment features were provided, but also the perceived emphasis placed upon the features during the therapy session. This differs somewhat from what amount has represented in previous research. Thus, the findings from the current and previous studies are not directly comparable.

As discussed above, competence is one of four constructs (i.e., adherence, amount, purity, competence) that encompasses treatment integrity. Competence refers to the skill with which treatment techniques are provided. The current project did not measure therapist competence because at the time that the project began a reliable measure of competence was not available. Thus, it is unknown if the Adherence Scale addressed a construct independent of competence. In Study 3, it is possible that therapist competence may have influenced the effect of one or all of the predictors (i.e., adherence, amount, purity).

Other limitations of the present project concern the statistical findings. Of the correlational relationships that reached statistical significance, many were low in magnitude, thus accounting for a small amount of variance. This does not mean that the relationships were statistical anomalies, nor should it inhibit further exploration of the associations that they identify. The low magnitude of the correlations does, however,

limit the practical relevance of the findings. Because so much of the variance in the variables remains unaccounted for, one must question the importance of a relationship when only 3% - 5% of the variance is explained. With a large proportion of variance unexplained there is great potential for influence from other variables.

A problematic issue in the present project concerned the sheer number of statistical tests conducted in the exploratory analyses involving the items of the Adherence Scale and the resultant inflationary effect on Type I error rates. The choice of .01 as the probability level in the exploratory analyses resulted in a trade-off between statistical rigour (low Type I error) and conceptual relevance (power). That some of the significant correlations represent error cannot be ruled out.

Another possible limitation concerns the possibility that the raters may have developed certain response tendencies in rating particular treatment features of particular patient-therapist pairs. In other words, as a rater provided ratings of sessions of a particular pair across the course of therapy, he or she may have developed a response bias regarding the emphasis of certain features. Because the reliability determinations were based on ratings of single sessions from different pairs, they were insensitive to the possibility of response tendencies affecting reliability.

The limitations of the project require that interpretation of the findings be subject to qualification. Attempts at replication are the only effective means of substantiating the choices made in the present project and validating the findings it produced.

IMPLICATIONS OF THE CURRENT FINDINGS

The present project developed a reliable measure of adherence and examined its predictive validity. As suggested above, inferences about how adherence and related constructs affect the process and outcome of psychotherapy cannot be made with certainty without additional empirical study. Nevertheless, some implications can be entertained if they are regarded as tentative and subject to future validation.

Use of the Adherence Scale.

The Adherence Scale has the capacity to reliably measure and differentiate interpretive and supportive forms of psychotherapy on a number of features. Historically, there has been much theoretical and research interest in interpretive therapy. Recently, considerable interest has been shown for supportive therapy. Both can be expected to be the focus of continuing research. The Adherence Scale provides an efficient means of treatment verification.

The Adherence Scale can be applied in several contexts. The most immediate and likely application of the Adherence Scale is in a research context. The Adherence Scale has been shown to provide reliable information about treatment integrity, which as discussed earlier, is an expected methodological requirement in psychotherapy research. Researchers studying dynamic forms of therapy could use the Adherence Scale to empirically verify the treatments used in their investigations. The Adherence Scale has several practical advantages for researchers who wish to utilize the scale in their studies. First, the scale is brief. Rating time requires approximately one hour per 50-minute therapy session. Second, only one rater is required for reliable ratings. Thus, manpower

need not be compromised by the use of multiple raters. Third, clinically inexperienced raters can be used to achieve reliable ratings. The ratings of the therapist behaviours do not require a high level of inference. Fourth, raters can be trained in a group situation in a reasonable period of time. All four of these advantages indicate that the Adherence Scale can be used in a cost-effective manner.

A second area in which the Adherence Scale may be used is in therapist training programs. A precise delineation of a trainee's technical behaviour is essential to determine whether the therapy being provided is the therapy being taught. Fledgling therapists need reliable feedback about what they are actually doing in therapy. In training programs that teach dynamic forms of psychotherapy, the Adherence Scale could be utilized to provide trainees and trainers with information about the trainee's technical behaviour. This information could highlight areas in which the therapist is having difficulty as well as areas which are emphasized satisfactorily. The Adherence Scale could also be used to monitor the consistency of the trainee's technique during the training period.

A related application of the Adherence Scale could be in the clinical setting of practising therapists. Therapists who participated in Piper et al.'s 1997 study welcomed the feedback provided by the Adherence Scale. Perhaps therapists in other settings would also appreciate feedback about their technical behaviour. In clinical settings not associated with teaching or research, there is often little opportunity for feedback regarding whether a therapist's technical behaviour is consistent with the treatment that he or she intended to provide. It is inevitable that there will be some occasions where a

therapist will stray from the intended therapy. The Adherence Scale could be used intermittently to supplement ongoing supervision and provide therapists with information regarding his or her technique, e.g., amount, type, consistency. In this way, therapists could learn more precisely about what they are providing in therapy and perhaps adjust their technique based upon this information.

Effect of Therapist's Technical Behaviour.

In general, the findings indicated that the variables representing therapists' technical behaviour (adherence, amount, purity) had minimal impact on the process and outcome of psychotherapy. Nevertheless, examination of the effect of the 14 treatment features of the Adherence Scale revealed that one item, impression of therapist, was significantly associated with treatment outcome. Greater emphasis on transference in supportive therapy was related to poorer outcome regarding the patient's symptomatology and social-sexual functioning. This has possible implications for therapists who practice supportive therapy. It may be in the patient's best interest if the therapist completely avoids emphasis on transference in supportive treatment. A focus on transference is not consistent with the supportive protocol. The orientation of supportive therapy emphasizes current realities and is other-focused. In supportive therapy, the therapist attempts to clarify the patient's current life situation and presenting problems, but refrains from directly addressing unconscious conflicts. The person focus is upon contemporary people in the patient's life as opposed to early life figures or the therapist. When the therapist has maintained this focus, a shift toward examination of transference represents an abrupt change. The patient is suddenly confronted with having to explore feelings

about someone who is immediately present, which heightens the patient's anxiety and may elicit confusion. Furthermore, because the patient's unconscious wishes, conflicts, and uncomfortable emotions are not being addressed in therapy, the patient may not be prepared to work with the transference. Therefore, the patient may experience an examination of transference as negative criticism or blame. Although the therapist may occasionally be tempted to interpret transference in supportive therapy, the results suggest that this strategy is contraindicated.

Examination of the 14 features of the Adherence Scale also revealed that two items, impression of therapist and linking, were significantly associated with therapist-rated alliance in STI therapy. Greater emphasis on transference and transference linking was related to a strong therapist-rated alliance. As described earlier, one possible causal explanation for this relationship is that when the therapist perceived a strong alliance, he or she provided greater emphasis on the transference. Therapist-rated alliance, however, was not highly correlated with patient-rated alliance. Thus, even though the therapist may consider the alliance to be strong, the patient may not agree. This may have important consequences for the use of techniques that focus on transference. The interpretation of transference identifies and explores unconscious conflicts that are associated with painful affect. The patient must feel safe in therapy and believe that he or she has a strong working relationship with the therapist in order to tolerate the intensity of exploring transference issues. If the therapist perceives the alliance to be strong and thus begins focusing on the transference, but the patient does not share this perception, the patient may not be ready for an intense interpretive focus. As a result, the patient's anxiety may

heighten to an intolerable level and lead to withdrawal from therapy. Previous research (Piper et al., 1991) suggests that there may be a cyclical relationship between transference interpretations and a weak alliance. That is, the therapist may respond to a weak alliance with increased transference interpretations, which further weakens the alliance. This suggests that the therapist needs to assess the patient's perception of the alliance before he or she begins to focus on the transference.

THEMES FOR FUTURE PSYCHOTHERAPY PROCESS RESEARCH

Finally, themes for future process investigations will be considered.

1. Use of the Adherence Scale revealed that therapist adherence can be reliably measured. Because the Adherence Scale is new, its convergent and discriminant validity have yet to be determined. The Adherence Scale needs to be compared to different scales that measure similar constructs (convergent validity) as well as similar scales that measure different unrelated constructs (discriminant validity). This should be considered in order to verify the construct that the Adherence Scale is intended to measure.

2. Although the use of treatment manuals is intended to minimize the effect of the therapist, one should not assume that the therapist's influence is negated. It seems reasonable to suspect that technical adherence, skill, and interpersonal manner may be interrelated in important ways. Exactly how they are related is less clear. Schaffer (1982) differentiates the therapist's contribution into three conceptual dimensions: 1) type of therapist behaviour, referring to specific techniques

employed; 2) the skillfulness of the therapist, defined as timeliness, persuasiveness, neutrality, and degree of discrepancy from the patient's point of view; and 3) interpersonal manner of the therapist, as reflected by attitudes of empathy, warmth, and genuineness. Although Schaffer sees these as independent dimensions, it may be more accurate to view them as integrated. Thus, rather than simply assuming that the therapist's effect is minimized by adherence to a technical manual and that technique is responsible for any subsequent effect, it would be informative to measure the skill and interpersonal manner of the therapist in addition to technical adherence.

3. In Study 3, the effect of therapist adherence across the entire treatment period was examined. What is unknown from the present study is whether adherence had a differential effect during various phases of therapy (i.e., early, middle, late phase of therapy). Earlier research (DeRubeis & Feely, 1990; 1995) found that adherence in the early phase of therapy (up to session three) was significantly associated with favourable outcome. Thus, an investigation of the effect of adherence at different points of time during the course of therapy may clarify how variations in adherence are predicted by and predictive of variations in the alliance and patient outcome.

4. A related issue is whether the alliance and treatment outcome are related more strongly to overall adherence or to what therapists are doing at specific moments within therapy. In other words, research needs to address whether general therapist adherence over the course of a treatment session is a better or worse

predictor of the alliance and outcome than specific therapist behaviour during discrete moments in the treatment session. This research approach is consistent with that proposed by investigators such as Elliott (1983) and Greenberg (1986), who have recommended that investigators consider patterns of change in the therapy process. The task is to empirically observe what patient behaviours are set in motion by what therapist interventions at what particular points in therapy, and to identify those strategies essential for favourable change. In this sense, outcome is not considered to be a simple, static phenomenon, but rather as a continuously changing process. Therefore, therapist technique can have various outcomes, ranging from its immediate impact within the session, to its immediate impact following the session, to its ultimate impact at termination or follow-up of therapy.

5. Future research could also examine whether adherence to a specific treatment manual is more efficacious than allowing therapists to use their clinical judgement about which techniques to administer given their perceptions of patient needs. Such research may serve as a means to determine if the relatively high level of structure seen in some treatment manuals actually contributes to the favourable outcome of treatment.

6. It may also be helpful for future research to develop adherence measures for various modalities (individual, group, family) of psychotherapy. Given the different (and sometimes antagonistic) interventions of the different modalities, one measure may not suffice, although it is conceivable that they would share

many common features. Piper and his colleagues at the Edmonton Psychotherapy Research Centre have taken a step in this direction by modifying the Adherence Scale for application to dynamic group psychotherapy.

7. Another potential topic of future research is to address is the derivation of cutoff scores to decide when a therapist is or is not adhering to the treatment manual. Although the cutoff values and adjustment methods employed in the present project were derived logically, they did not represent all possibilities. At this point, further empirical work is needed to develop sophisticated, non-arbitrary criteria that will serve to validate cutoff scores.

8. Various therapist and patient factors may have an impact on therapist technical behaviour. Future research could inquire into questions related to the mediation of therapist technique such as: What personal characteristics of the therapist are related to the therapist's ability to adhere to a treatment manual? As described earlier, Henry, Schacht et al. (1993) found that therapists with hostile and controlling introjects showed the greatest technical adherence to the TLDP treatment manual. This raises concern because previous research by Henry and his group (1990) indicated that these therapists are most prone to engage in counter-therapeutic interpersonal relationships. Another question is: Do changes in therapist technical behaviour differ as a function of specific patient characteristics? Rounsaville et al. (1988) found that patient hostility and patient's negative expectations were strongly related to the therapist's technical performance. When patients were more difficult (i.e., more hostile and negative),

therapists did not adhere well to the treatment protocol. By addressing these questions, researchers could anticipate how therapists may respond to providing manual-guided treatments.

9. Finally, more studies are needed concerning the relation of the therapist's adherence, as well as amount and purity of therapy, to the therapeutic alliance and treatment outcome. As the review above has shown, the studies vary: some show a significant relationship and others show no association. The differences in the results are not easy to understand. The variation does not seem to be related to the type of treatment, but might, as discussed earlier, be related to the nature of the construct that was actually investigated. By providing clear and independent definitions of three related constructs (adherence, amount, purity) of treatment integrity, the present project hopefully will facilitate more precise research that clarifies the relationship between adherence and the process and outcome of psychotherapy.

Table 1

Axis I Current Diagnoses[1] of Patients in Study 1 (N=50), Study 2 (N=50), and Study 3 (N=144)

	Study 1		Study2		Study 3	
Diagnosis	N	%	N	%	N	%
Major depressive episode	22	44.0	34	68.0	70	48.6
Dysthymic disorder	5	10.0	7	14.0	14	9.6
Cyclothymic disorder	1	2.0	1	2.0	0	0.0
Depressive disorder NOS	1	2.0	1	2.0	4	2.8
Panic disorder	3	6.0	3	6.0	7	4.9
Social phobia	0	0.0	0	0.0	1	0.7
Obsessive-compulsive	1	2.0	1	2.0	1	0.7
Generalized anxiety	0	0.0	0	0.0	2	1.4
Alcohol abuse	0	0.0	5	10.0	9	6.2
Drug abuse	1	2.0	0	0.0	1	0.7
Somatoform disorder	0	0.0	0	0.0	1	0.7
Primary insomnia	0	0.0	1	2.0	0	0.0
Transvestic fethisism	1	2.0	0	0.0	0	0.0
Inhibited female orgasm	1	2.0	0	0.0	0	0.0
Anorexia nervosa	0	0.0	0	0.0	1	0.7
Bulimia	1	2.0	1	2.0	5	3.5
Eating disorder NOS	0	0.0	4	8.0	0	0.0
Adjustment disorder	5	10.0	3	6.0	10	6.9

[1] Assessed in a clinical interview using DSM-III or using the Structured Clinical Interview for DSM-III-R (SCID)

Table 2

Axis II Diagnoses[1] of Patients in Study 1 (N=50), Study 2 (N=50), and Study 3 (N=144)

	Study 1		Study2		Study 3	
Diagnosis	N	%	N	%	N	%
Paranoid	0	0.0	0	0.0	31	21.5
Schizoid	0	0.0	0	0.0	6	4.2
Schizotypal	0	0.0	0	0.0	11	7.6
Antisocial	0	0.0	0	0.0	4	2.8
Borderline	4	8.0	3	6.0	32	22.2
Histrionic	0	0.0	1	2.0	4	2.8
Narcissistic	1	2.0	2	4.0	4	2.8
(Conduct History)	0	0.0	0	0.0	10	6.9
Avoidant	2	4.0	1	2.0	42	29.2
Dependent	5	10.0	5	10.0	25	17.4
Obsessive-compulsive	1	2.0	4	8.0	35	24.3
Passive-aggressive	0	0.0	0	0.0	15	10.4
Self-defeating	0	0.0	0	0.0	19	13.2
Personality disorder NOS	3	6.0	4	8.0	10	6.9

[1] Assessed in a clinical interview using DSM-III or using the computer-assessed Structured Clinical Interview for DSM-III-R (Auto-SCID)

Table 3

Demographic Information for Patient Samples in Study 1 (N=50), Study 2 (N=50), and Study 3 (N=144)

	Study 1	Study 2	Study 3
Age	M = 31.6 SD = 9.7 range = 18-60	M = 33.6 SD = 9.7 range = 20-61	M = 34.3 SD = 9.6 range = 18-62
Sex	30 female, 20 male	34 female, 16 male	88 female, 56 male
Marital status	21 single 19 married/partner 10 separated/divorced	16 single 23 married/partner 11 separated/divorced	53 single 61 married/partner 30 separated/divorced
Employment	35 employed 9 unemployed	32 employed 7 unemployed	102 employed 42 unemployed
Education	27 educated beyond high school	33 educated beyond high school	97 educated beyond high school
Psychotropic medication	19 on medication	26 on medication	60 on medication
Previous psychiatric history	37 (yes)	37 (yes)	105 (yes)
Previous hospitalization	5 (yes)	6 (yes)	12 (yes)

Table 4

Therapist Information: Demographic Variables and Studies

Therapist	Sex	Age	Profession	Years Practicing	Original Study[1]	Current Study
1	M	34	Psychiatrist	5	STI	Study 1
2	M	65	Psychiatrist	35	STI	Study 1
3	F	37	Social Worker	9	STI	Study 1
4	M	40	Psychiatrist	12	STI	Study 1
5	F	35	Social Worker	8	STI, STI-SUP	Study 1, 2, 3
6	M	39	Psychologist	12	STI, STI-SUP	Study 1, 2, 3
7	F	38	Psychologist	7	STI-SUP	Study 1
8	M	43	Nurse	7	STI-SUP	Study 1
9	F	37	Occupational Therapist	8	STI-SUP	Study 2, 3
10	M	47	Psychiatrist	19	STI-SUP	Study 2, 3
11	F	47	Social Worker	10	STI-SUP	Study 1
12	F	41	Nurse	13	STI-SUP	Study 1
13	F	52	Psychologist	11	STI-SUP	Study 2, 3

Table 4 (continued)

14	F	52	Occupational Therapist	3	STI-SUP	Study 2, 3
15	F	42	Social Worker	15	STI-SUP	Study 2, 3
16	M	37	Psychologist	11	STI-SUP	Study 2, 3
17	F	42	Psychologist	15	STI-SUP	Study 1
18	M	38	Psychologist	8	STI-SUP	Study 1

[1] STI = Piper et al.'s (1990) individual, short-term interpretive study; STI-SUP = Piper et al.'s (1997) comparative, individual, short-term interpretive-supportive study

Table 5

Mean and Standard Deviation for Each Predictor Variable Within Each Treatment Subsample[a] and Across All Cases[b]

	Supportive Cases		Interpretive Cases		All Cases	
Predictor Variables	M	SD	M	SD	M	SD
Method A-Adjusted Adherence	16.94	2.45	35.02	3.13	25.98	9.49
Method B-Adjusted Adherence	18.81	5.35	35.61	4.71	27.20	9.81
Unadjusted Full-Scale	14.93	3.49	39.05	3.78	26.99	12.63
Amount of Interpretive Technique	2.40	1.49	14.04	3.16	8.22	6.34
Amount of Supportive Technique	15.46	3.19	3.00	1.71	10.20	13.92
Purity of Interpretive Technique	.13	.07	.82	.09	.48	.36
Purity of Supportive Technique	.87	.07	.18	.09	.52	.36

[a] N = 72
[b] N = 144

Table 6

Correlations Between Adherence, Amount, and Purity Within Intepretive Treatment[a]

	Adherence			Purity	
	Method A-adjusted Adherence	Method B-adjusted Adherence	Unadjusted Full-Scale	Purity of Interpretive Therapy	Purity of Supportive Therapy
Amount					
Intepretive Subscale	-.18	-.07	.89*	.50*	-.50*
Supportive Subscale	-.13	-.07	-.56*	-.89*	.89*
Purity					
Purity of Interpretive Therapy	.12	.09	.82*	----	----
Purity of Supportive Therapy	-.12	-.09	-.82*	----	----
Unadjusted Full-Scale	-.09	-.03	----	----	----

[a] N = 72

** $p < .001$

Table 7

Correlations Between Adherence, Amount, and Purity Within Supportive Treatment[a]

	Adherence			Purity	
	Method A-adjusted Adherence	Method B-adjusted Adherence	Unadjusted Full-Scale	Purity of Interpretive Therapy	Purity of Supportive Therapy
Amount					
Intepretive Subscale	.20	-.10	.41***	.93***	-.93***
Supportive Subscale	-.32*	.30*	-.90***	-.30**	.30**
Purity					
Purity of Interpretive Therapy	.39***	-.10	.67***	----	----
Purity of Supportive Therapy	-.39***	.10	-.67***	----	----
Unadjusted Full-Scale	.38***	-.32***	----	----	----

[a] N = 72

* $p < .05$
** $p < .01$
*** $p < .001$

Table 8

Means and Standard Deviations for Patient and Therapist Alliance Ratings in Each Treatment Subsample

	Alliance Ratings			
	Patient-rated		Therapist-rated	
	M	SD	M	SD
STI Therapy	5.53	.93	5.10	.62
SUP Therapy	5.73	.91	5.27	.55

Table 9

Outcome Variable Means and Standard Deviations at Pretherapy and Posttherapy for Each Treatment Subsample

	STI Therapy				SUP Therapy			
	Pretherapy		Posttherapy		Pretherapy		Posttherapy	
Variable	M	SD	M	SD	M	SD	M	SD
Interpersonal distress	1.40	.56	1.21	.58	1.51	.54	1.13	.63
Social functioning	4.3	1.32	3.9	1.30	4.9	1.63	4.2	1.44
Family functioning	4.2	1.36	3.8	1.13	4.3	1.10	3.8	1.25
Sexual functioning	4.2	2.12	3.6	2.05	5.1	2.13	4.6	2.30
Depression[a]	19.8	11.72	11.1	10.05	17.3	10.30	8.5	8.71
Anxiety	52.3	9.87	45.4	10.08	52.7	10.28	42.1	11.40
General symptomatic distress	1.14	.59	.72	.55	1.13	.57	.64	.56
Self-esteem	3.7	1.97	2.5	1.86	3.8	1.96	2.0	1.88
Life satisfaction[b]	3.1	1.21	4.3	1.23	3.2	1.14	4.6	1.33
Mature defences[b]	4.8	1.22	5.3	1.16	4.5	1.14	5.1	1.17
Maladaptive defences	4.2	.87	4.1	.96	4.4	.84	4.0	.91
Target severity (patient)	3.9	.58	2.5	1.12	3.8	.70	2.5	1.12
Target severity (assessor)	3.7	.65	2.3	1.06	3.7	.68	2.2	1.10

[a] Prorated to approximate a 21-item inventory [b] High scores are favourable

Table 10

Rater Reliabilities[1,2] of the Full-Scale, Subscales, and Items of the Adherence Scale from Three Calibration Periods in Piper et al.'s 1997 Comparative Study

	Training Phase	Middle Phase	Late Phase
Full-Scale	.93	.96	.90
Interpretive Subscale	.88	.87	.85
Supportive Subscale	.87	.94	.83
Items			
1	.84	.86	.74
2	.74	.72	.40
3	.71	.79	.49
4	.67	.59	.49
5	.60	.57	.83
6	.70	.94	.82
7	.31	.55	.64
8	.77	.89	.80
9	.72	.64	.64
10	.57	.83	.57
11	.82	.74	.38
12	.74	.90	.85
13	.53	.44	.64
14	.11	.07	.51

[1] Rater reliability assessed using Shrout & Fleiss's (1979) ICC model 2: ICC (2,1)
[2] K = 7 raters, N = 8 cases

Table 11

Rater Reliability [1,2] for the Adherence Scale Items

Item	Study 1	Study2
1 - gratify	.81	.58
2 - pressure	.75	.41
3 - noninterpretive interventions	.80	.46
4 - explore	.71	.47
5 - guidance	.84	.71
6 - interpretations	.90	.77
7 - problem solving	.81	.43
8 - impression of therapist	.87	.87
9 - explanations	.76	.44
10 - linking	.74	.53
11 - praise	.87	.43
12 - patient-therapist relationship	.70	.72
13 - therapist disclosure	.61	.28
14 - impression of others	.25	.50
Average of 14 items	.74	.54
Supportive Subscale	.93	.69
Interpretive Subscale	.88	.84
Full-Scale	.95	.95

[1] Rater reliability estimated using ICC (2,1)
[2] K = 2 raters

Table 12

Internal Consistency[1] for the Full-Scale and Subscales of the Adherence Scale

	Study 1		Study 2	
Scale	Rater 1	Rater 2	Rater 1	Rater 2
Full-Scale	.92	.95	.92	.86
Interpretive Subscale	.86	.88	.92	.81
Supportive Subscale	.92	.94	.81	.87

[1] Internal consistency estimated using Cronbach's alpha

Table 13

Rotated Factor Solution[1] for the Adherence Scale

Items	Factor I	Factor II
Supportive		
1	.76	-.37
3	.64	-.19
5	.71	-.36
7	.80	-.23
9	.68	-.17
11	.74	-.22
13	.82	-.17
Interpretive		
2	-.34	.53
4	-.23	.75
6	-.30	.77
8	-.15	.82
10	-.24	.70
12	-.19	.87
14	-.15	.44

[1] Rotated to the Varimax criterion

Table 14

Comparison of Supportive and Interpretive Therapy by Full-Scale, Subscale, and Item of the Adherence Scale

	Supportive Cases[a]		Interpretive Cases[a]			
Supportive Items	M	SD	M	SD	t	p
1	2.91	.68	.36	.42	27.07	.000
3	3.73	.40	1.96	.87	15.76	.000
5	2.38	.96	.19	.26	18.68	.000
7	1.55	.85	.07	.15	14.48	.000
9	1.58	.83	.19	.30	13.37	.000
11	1.78	.80	.07	.14	17.85	.000
13	1.56	1.02	.15	.25	11.39	.000
Interpretive Items						
2	.27	.41	1.92	1.00	12.99	.000
4	.52	.54	2.32	.98	13.67	.000
6	.57	.47	3.31	.53	32.75	.000
8	.02	.08	1.34	.88	12.63	.000
10	.02	.06	1.17	.76	12.65	.000
12	.25	.27	2.08	.73	19.89	.000
14	.74	.80	1.91	1.05	7.54	.000
Supportive Subscale	15.46	3.19	3.00	1.71	29.18	.000
Interpretive Subscale	2.40	1.49	14.04	3.16	29.29	.000
Full-Scale	14.93	3.49	39.05	3.78	39.81	.000

[a] N = 72

Table 15

Correlations Between Predictor Variables and Therapeutic Alliance Within Each Treatment Subsample and Across All Cases

	STI Therapy		SUP Therapy		Combined Sample	
	Alliance Factors		Alliance Factors		Alliance Factors	
Predictor Variables	Patient-rated (N=71)	Therapist-rated (N=72)	Patient-rated (N=71)	Therapist-rated (N=72)	Patient-rated (N=142)	Therapist-rated (N=144)
Adherence						
Adjusted (Method A) Full-Scale	.15	.08	.18	-.00	.07	.12
Adjusted (Method B) Full-Scale	.06	.07	.22	.08	-.07	.02
Unadjusted Full-Scale Score	-.07	.23*	-.03	-.12	.01	.21**
Amount						
Intepretive Subscale	-.04	.36**	.10	-.02	-.10	-.04
Supportive Subscale	.07	.15	.04	-.03	.09	.18*
Purity						
Purity of Intepretive Therapy	-.07	-.00	.10	-.03	-.11	-.14
Purity of Supportive Therapy	.07	.00	-.10	.03	.11	.14

* $p < .05$
** $p < .01$

Table 16

Correlations Between Predictor Variables and Treatment Outcome Within Each Treatment Subsample and Across All Cases

	STI Therapy			SUP Therapy			Combined Sample		
	Outcome Factors[a]			Outcome Factors[a]			Outcome Factors[a]		
Predictor Variables	I (N=69)	II (N=69)	III (N=67)	I (N=71)	II (N=71)	III (N=70)	I (N=140)	II (N=140)	III (N=137)
Adherence									
Adjusted (Method A) Full-Scale	.03	.13	-.08	-.10	.05	-.06	.05	.02	.01
Adjusted (Method B) Full-Scale	-.09	.09	.10	.00	-.07	.04	-.09	.08	.05
Unadjusted Full-Scale Score	.02	.07	-.09	-.06	-.00	-.02	-.05	.05	.01
Amount									
Interpretive Subscale	-.13	.09	.06	.10	-.11	.06	.11	-.03	-.04
Supportive Subscale	-.04	-.03	-.10	.11	.18	.14	-.01	.13	.12
Purity									
Purity of Interpretive Therapy	.00	.09	.11	.06	-.11	.06	.14	-.04	-.04
Purity of Supportive Therapy	-.00	-.09	-.11	-.06	.11	-.06	-.14	.04	.04

[a] Outcome factor I = General Symptomatology and Dysfunction; Outcome factor II = Nonuse of Mature Defences and Family Pathology; Outcome factor III = Social-Sexual Maladjustment

Table 17

Correlations Between Therapeutic Alliance and Treatment Outcome Within Each Treatment Subsample and Across All Cases

	Outcome Factors		
Alliance Factors	General Symptomatology and Dysfunction	Nonuse of Mature Defences and Family Pathology	Social-Sexual Maladjustment
STI Therapy			
Patient-rated	-.16 (68)[a]	-.24* (68)	.13 (66)
Therapist-rated	-.10 (69)	-.11 (69)	-.01 (67)
SUP Therapy			
Patient-rated	-.37** (70)	-.19 (70)	-.11 (69)
Therapist-rated	-.22 (71)	-.06 (71)	-.04 (70)
Combined Sample			
Patient-rated	-.27** (138)	-.21* (138)	.00 (135)
Therapist-rated	-.17* (140)	-.08 (140)	.02 (137)

[a] Numbers in parentheses indicate sample size

* $p < .05$
** $p < .01$

Table 18

Average Emphasis Ratings for Adherence Scale Items in Interpretive Treatment

	Emphasis Rating		
Item	Mean	SD	Range
1 - gratify	.36	.42	2.11
2 - pressure	1.92	1.00	3.89
3 - noninterpretive interventions	1.96	.87	3.78
4 - explore	2.32	.98	4.00
5 - guidance	.19	.26	1.00
6 - interpretations	3.31	.53	2.44
7 - problem solving	.08	.15	.78
8 - impression of therapist	1.34	.88	3.89
9 - explanations	.19	.30	1.44
10 - linking	1.17	.76	3.33
11 - praise	.07	.14	.67
12 - patient-therapist relationship	2.08	.73	2.89
13 - therapist disclosure	.15	.25	1.44
14 - impression of others	1.91	1.05	3.89

Table 19

Average Emphasis Ratings for Adherence Scale Items in Supportive Treatment

	Emphasis Rating		
Item	Mean	SD	Range
1 - gratify	2.91	.68	2.89
2 - pressure	.27	.41	2.44
3 - noninterpretive interventions	3.73	.40	2.00
4 - explore	.52	.54	2.22
5 - guidance	2.38	.96	3.78
6 - interpretations	.57	.47	2.00
7 - problem solving	1.55	.85	4.00
8 - impression of therapist	.03	.09	.56
9 - explanations	1.58	.83	3.33
10 - linking	.02	.06	.33
11 - praise	1.78	.80	3.11
12 - patient-therapist relationship	.25	.27	1.33
13 - therapist disclosure	1.56	1.02	3.78
14 - impression of others	.74	.80	2.78

Table 20

Correlations Between Adherence Scale Items and Therapeutic Alliance Within Interpretive Treatment

	Alliance Factors	
Items	Patient-rated (N=71)	Therapist-rated (N=72)
1 - gratify	.12	.13
2 - pressure	-.11	-.09
3 - noninterpretive interventions	-.10	.04
4 - explore	.07	.28
5 - guidance	.16	.22
6 - interpretations	.07	.27
7 - problem solving	-.12	.02
8 - impression of therapist	-.10	.32*
9 - explanations	.18	.17
10 - linking	.11	.33*
11 - praise	.28	.18
12 - patient-therapist relationship	-.11	.11
13 - therapist disclosure	.18	.13
14 - impression of others	-.05	.18

* $p < .01$

Table 21

Correlations Between Adherence Scale Items and Therapeutic Alliance Within Supportive Treatment

	Alliance Factors	
Items	Patient-rated (N=71)	Therapist-rated (N=72)
1 - gratify	.12	.06
2 - pressure	-.24	-.29
3 - noninterpretive interventions	.16	.15
4 - explore	.18	.02
5 - guidance	-.13	.15
6 - interpretations	-.01	.25
7 - problem solving	-.09	-.04
8 - impression of therapist	.04	.21
9 - explanations	.01	.08
10 - linking	.05	.12
11 - praise	.24	.08
12 - patient-therapist relationship	-.03	.21
13 - therapist disclosure	.11	.01
14 - impression of others	.18	-.11

Table 22

Correlations Between Adherence Scale Items and Therapeutic Alliance Across All Cases

	Alliance Factors	
Items	Patient-rated (N=142)	Therapist-rated (N=144)
1 - gratify	.15	.16
2 - pressure	-.17	-.19
3 - noninterpretive interventions	.08	.15
4 - explore	-.02	.02
5 - guidance	.06	.19
6 - interpretations	-.09	-.04
7 - problem solving	.04	.09
8 - impression of therapist	-.13	.07
9 - explanations	.12	.17
10 - linking	-.03	.07
11 - praise	.20	.16
12 - patient-therapist relationship	-.14	-.05
13 - therapist disclosure	.15	.12
14 - impression of others	-.02	-.02

Table 23

Correlations Between Adherence Scale Items and Treatment Outcome Within Interpretive Treatment

Item	General Symptomatology and Dysfunction (N=69)	Nonuse of Mature Defences and Family Pathology (N=69)	Social-Sexual Maladjustment (N=67)
1 - gratify	-.17	-.14	-.13
2 - pressure	-.00	.19	.04
3 - noninterpretive interventions	.14	.05	-.03
4 - explore	-.13	.03	-.08
5 - guidance	-.14	-.17	.01
6 - interpretations	-.25	.04	-.07
7 - problem solving	.16	.00	-.05
8 - impression of therapist	.01	.11	.12
9 - explanations	-.16	-.07	-.13
10 - linking	-.09	.06	-.06
11 - praise	-.08	.03	-.02
12 - patient-therapist relationship	-.12	.14	-.02
13 - therapist disclosure	-.18	.03	-.21
14 - impression of others	.01	-.20	.21

Table 24

Correlations Between Adherence Scale Items and Treatment Outcome Within Supportive Treatment

Item	General Symptomatology and Dysfunction (N=71)	Nonuse of Mature Defences and Family Pathology (N=71)	Social-Sexual Maladjustment (N=70)
1 - gratify	-.03	-.04	.01
2 - pressure	.28	-.10	.03
3 - noninterpretive interventions	-.02	.01	-.01
4 - explore	.03	.10	.03
5 - guidance	.13	.03	.05
6 - interpretations	-.17	-.22	-.09
7 - problem solving	.01	-.03	-.13
8 - impression of therapist	.38**	.22	.32*
9 - explanations	.02	-.01	-.08
10 - linking	.13	.08	.04
11 - praise	.01	-.00	.01
12 - patient-therapist relationship	.03	.15	.06
13 - therapist disclosure	-.01	.12	.08
14 - impression of others	.04	-.15	.09

* $p < .01$
** $p < .001$

Table 25

Correlations Between Adherence Scale Items and Treatment Outcome Across All Cases

Item	General Symptomatology and Dysfunction (N=140)	Nonuse of Mature Defences and Family Pathology (N=140)	Social-Sexual Maladjustment (N=137)
1 - gratify	-.15	.00	.05
2 - pressure	.15	.03	-.03
3 - noninterpretive interventions	-.07	.05	.04
4 - explore	.06	.01	-.07
5 - guidance	.08	.03	.08
6 - interpretations	.06	-.07	-.09
7 - problem solving	-.09	.01	-.01
8 - impression of therapist	.12	.03	.02
9 - explanations	-.12	.01	-.01
10 - linking	.06	.00	-.08
11 - praise	-.11	.03	.06
12 - patient-therapist relationship	.08	.03	-.06
13 - therapist disclosure	-.12	.09	.06
14 - impression of others	.09	.17	.10

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Appendix A: The Adherence Scale

0	1	2	3	4
No Emphasis	Minor Emphasis	Moderate Emphasis	Considerable Emphasis	Major Emphasis

The therapist attempted to:

1. ____ gratify the patient, i.e., make the patient feel good rather than anxious in the session.

2. ____ maintain pressure on the patient to talk, e.g., by at times remaining passive, by not breaking pauses, by not answering questions.

3. ____ make noninterpretive interventions, e.g., reflections, questions, provisions of information, clarifications, and confrontations.

4. ____ encourage the patient to explore uncomfortable emotions.

5. ____ provide guidance similar to the role of family doctor, e.g., advise a course of action more appropriate to healthy functioning regarding self-care, life skills, or interpersonal behaviour.

6. ____ make interpretations.

7. ____ engage in problem solving strategies with the patient, i.e., generating and evaluating alternative solutions to external life problems.

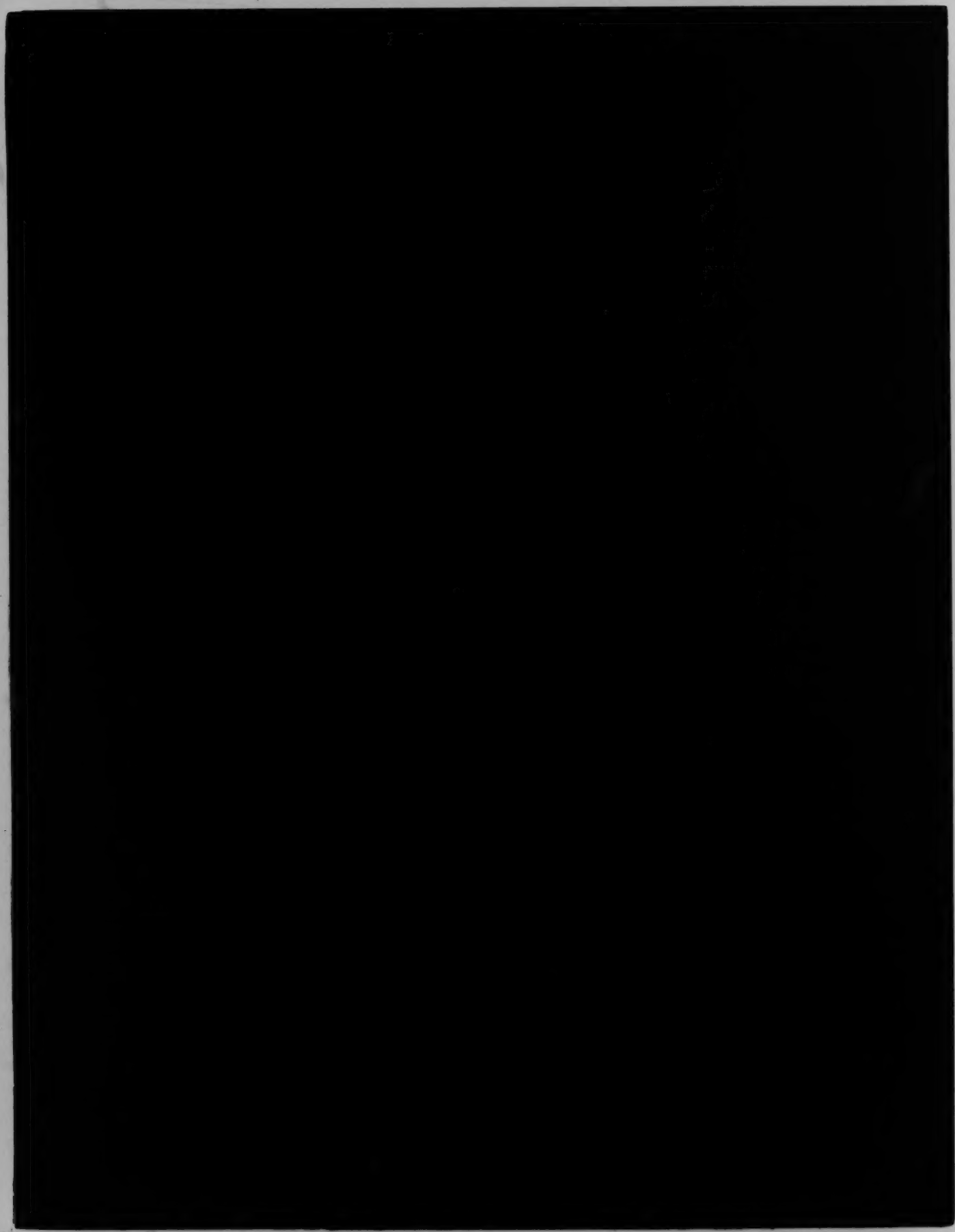
8. ____ direct attention to the patient's subjective impression of the therapist.

9. ____ offer explanations that locate the responsibility for the patient's difficulties outside him- or herself, e.g., in the patient's environment, as a function of interpersonal transactions, or in the patient's body chemistry or physiology.

10. ____ make links between the patient's relationship with the therapist and the patient's relationships with others.

11. ____ praise the patient.

12. ____ focus on the patient and therapist in the treatment situation rather than the patient and significant others outside the treatment situation.

13. ____ display personal information, opinions and/or values.

14. ____ direct attention to the patient's subjective impression of others outside the treatment situation.